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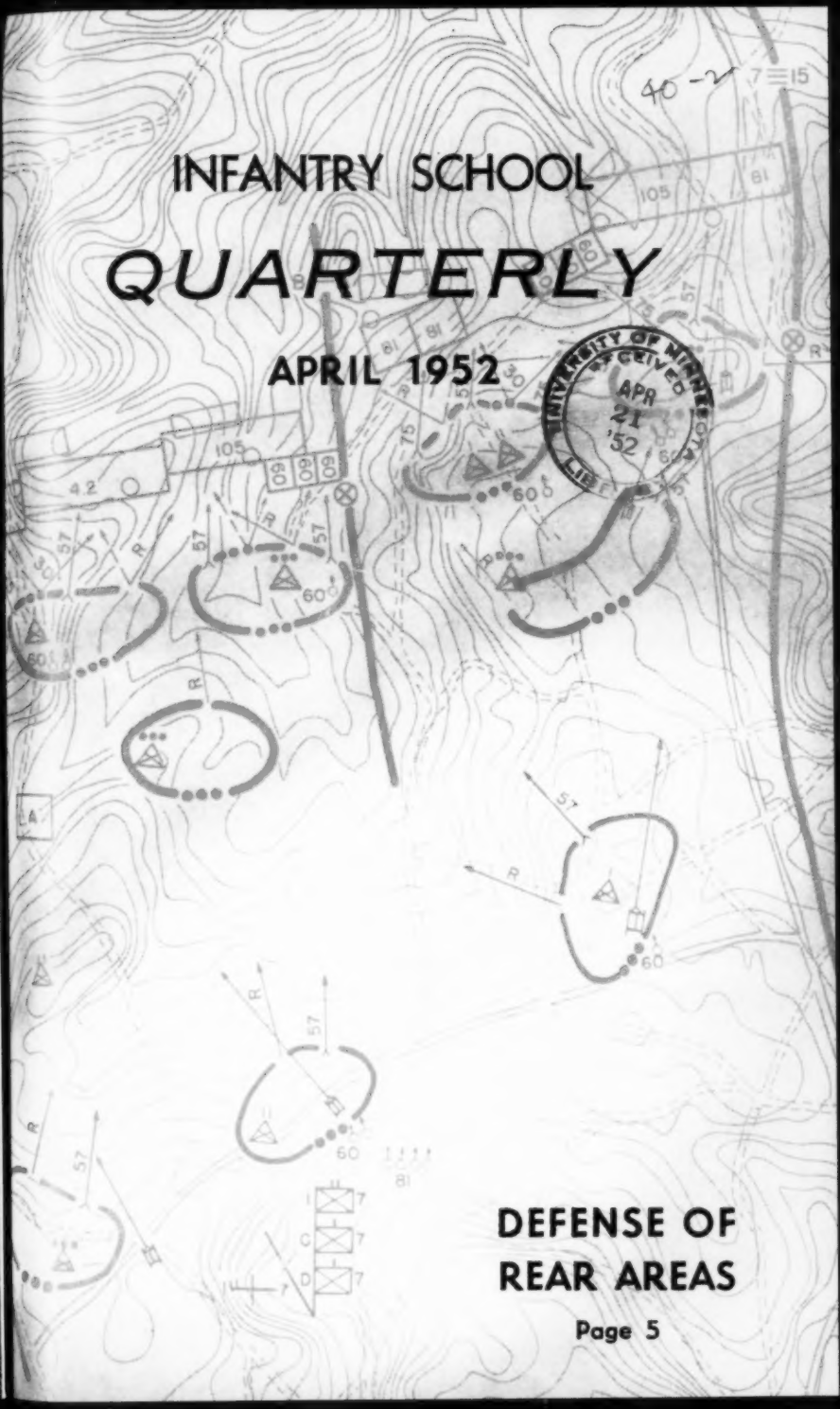

DEFENSE OF REAR AREAS

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The latest thought on Infantry

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DEFENSE OF REAR AREAS

By LT COL KARLTON WARMBROD, Infantry

World War II and more recently the action in Korea have demonstrated very clearly the vulnerability of rear areas to attack by airborne troops, infiltration parties, and guerilla forces. Of the three methods, only attack by airborne troops is new. Guerilla warfare and infiltration tactics are almost as old as war itself. History records numerous examples of guerilla forces having much to do with the defeat of armies. General Eisenhower estimated that the resistance forces in France alone were the equivalent of fifteen allied divisions. As for infiltration tactics, any veteran of the Pacific campaigns can recall how effectively they were used by the Japanese.

More recently, United Nations Forces have found North Korean and Chinese Communist Forces past masters at infiltration tactics. Rear area troops who, at the start of the Korean conflict felt they were relatively secure from attacks, have found out the hard way that they must be able to protect themselves and their installations at all times.

Airborne forces were used extensively for the first time during World War II by both the German and Allied forces. These operations ranged in size and scope from raids involving small airborne forces on primarily harassing missions to the employment of an airborne corps to capture and hold specific objectives. World War II experience with airborne operations, and the greater capabilities of new transport aircraft, tremendously increase the possibilities of airborne attack in future wars. Hence, the problem of defending against this type of attack in itself is becoming one of major importance.

Most Infantry officers have a thorough knowledge of the principles involved in organizing a normal front-line defensive position, and conducting a defense against ground attack. Few, however, feel they have a thorough knowledge of the additional defensive and security measures necessary to protect not only front-line positions but rear areas as well against airborne, guerilla, and infiltration attacks.

This article presents the basic considerations and the defensive and security measures necessary to protect the battle position and the division area against airborne, guerilla, and infiltration attacks.

A map exercise at the end of the article permits you to practice the principles involved in planning the defensive and security measures necessary to secure a front-line battalion defense area against these types of attacks. The general principles remain the same whether a battalion or a division rear area is involved.

From our knowledge of defensive tactics, we know that rear areas are found within the battle position as well as behind the rear extension of the regimental boundary. Generally speaking, then, we have rear areas from our front-line battalions all through our defensive structure.

If we understand the missions and objectives of airborne, infiltration, and guerilla attacks, we have a better chance to defend against them. Each has certain limitations or disadvantages of which we can take advantage in our defense.

Airborne Attacks: An enemy assaulting from the air can strike swiftly and in the area of his choice. His airborne forces may be expected to attack with surprise, in mass, and under cover of air support. Such forces usually operate in close coordination with other ground, air, or naval forces. Specific types of operations include:

1. *A deep airborne envelopment* to seize an airhead from which to initiate further land or air operations.

2. *An early link-up type operation* in which specific objectives are seized and held and enemy reserves blocked, in conjunction with a main ground attack.

3. *Raid and special type operations* to accomplish any of a wide variety of missions. These may include destroying key installations, destroying small enemy forces, reinforcing or assisting guerilla forces, disrupting communications, obtaining valuable information, or killing or capturing VIP's. After accomplishing a raid-type mission, the airborne forces normally withdraw by air, water, or by infiltrating back through front-line positions.

The independent and link-up type operations involve large forces normally having an objective deep in the defender's territory; the raid type involves relatively small forces and may strike anywhere. During World War II, the Russians were very successful on airborne raids just in rear of front-line positions.

Parachutists can land on almost any type terrain in daylight or dark. However, airborne operations have certain inherent disadvantages or limitations. For instance:

1. A large scale airborne operation requires air superiority because transport aircraft are vulnerable to defending airplanes and to ground fire while in flight to and over their drop and landing zones.

2. Airborne forces are extremely vulnerable to defending fires during landing and assembling.

3. Airborne force mobility is limited after the initial landing is made.

4. They are particularly vulnerable to attack by armor.

5. They need good weather, low wind, and good visibility.

6. Airborne troops lack heavy artillery and tanks during the initial landing phase.

Infiltration Attack: Infiltration is the movement of individuals or vehicles, singly or in small groups, at extended or irregular intervals.

Infiltrating parties enter forward defense areas mainly by sifting through front-line positions in the dark or during periods of low visibility. They may also enter through an open flank or through unoccupied areas. They may reach areas farther to the rear by parachute or

by water. Infiltration tactics involve relatively small forces. Their missions may include: destruction of ammunition dumps, C.P.'s, vital communications, etc., or they may seize vital terrain to assist a main ground attack.

The infiltration attack, too, has its limitations and disadvantages.

1. Members of such a force must work as individuals or in small groups. Therefore, they cannot sustain action against superior forces and if detected, are susceptible to defeat or capture.

2. They must achieve surprise to accomplish their mission.

3. In most cases, they must be able to accomplish their mission without support or help from other forces.

4. The lack of supplies limits the time they can operate behind enemy front lines.

Guerilla Attack: In order to interfere with military operations to the extent where it will seriously affect the fighting effectiveness of a military force, guerillas attack to inflict casualties, destroy rear area supplies and installations and, by attacking supply columns or demolitions along supply routes, reduce the effectiveness of the enemy to supply his forces. Normally, guerillas operate in small groups in rear areas where the civilian populace can support them. Forward dense areas from which civilians are normally evacuated are less likely to be bothered with guerilla attacks. Active guerilla warfare causes diversion of defending forces and materiel from other operations.

Certain inherent disadvantages and limitations of guerilla forces which offer defenders opportunity to reduce the effectiveness of this type of attack are:

1. Guerilla forces are normally inferior to regular forces in training and equipment.

2. They must operate in small groups to escape detection, and they require civilian support.

3. Guerilla forces cannot obtain a military decision by their hit and run tactics. Guerilla actions and infiltration tactics are similar in many respects. The main difference is that infiltrators normally operate in front line defensive areas and guerillas in areas farther to the rear. For success, both types of operations depend to a great extent on surprise, as does also the airborne attack.

Two questions confront the defender against any of these attacks. First, what forces are available for defense against them? Second, how do we defend against these attacks and at the same time maintain operational readiness to stop a ground attack directed against our front lines?

Forces Available: In the front-line areas or battle position the same forces that organize positions to stop the enemy ground attack also defend against airborne, infiltration, and guerilla attacks. The division reserve, in addition to its other missions, may have to defend that portion of the division area in rear of the battle position against these attacks. Within this area we find an increasing number of technical and administrative units, which support the front line units, and fewer combat troops. Here, then, we must count on technical and administrative units assisting in such a defense. We don't have

enough combat troops to assign the task to a separate combat force. No unit commander, whether he commands Infantry, artillery, or quartermaster troops, can forget that he is responsible for local defense of his unit and installation.

Defensive and Security Measures in the Battle Position: In the battle position, we have a compact and well-knit defense. The units within the battle position are mutually supporting. Therefore the defense against airborne, infiltration, and guerilla attacks in this area does not present a major problem *if we are not surprised by the enemy.*

To single out one of the three attacks as the greatest threat to integrity of the battle position would be impossible, because the type attack used varies with the terrain, the situation, and the type enemy we are fighting. Compare the following defensive and security measures necessary to cope with each type of attack.

Airborne attacks: The probability of a large-scale airborne attack on the battle position is not too great since there are usually enough combat forces to nullify such an attack. However, small-scale attacks or raid type operations may be carried out in the dark, or during periods of reduced visibility, without even local air superiority. The first defensive measures taken by each battalion in its assigned portion of the battle position include establishing communications and a warning system. This system uses the existing communication facilities and the observation posts established for the ground defense. However, in most cases, additional observation posts may be required throughout the depth of the battalion sector to cover all likely landing areas. In many cases, the warning system will have to be supplemented by motorized or foot patrols during darkness or periods of reduced visibility. All types of communication tie in observation posts and organized positions. The warning system reports the location, strength, and direction of movement of any airborne forces landing within the battalion area of responsibility. This system and the communications that serve it must be sufficient to provide control of defenses and warn of any airborne landing made in the battalion sector regardless of size.

Our second defensive measure includes instructing units, both combat and administrative, located within the battalion area of responsibility, that they must provide their own initial protection and security against this type of attack. The commander provides communications for such units to tie in with the battalion warning system.

Next, we organize tank-infantry teams prepared to move immediately to destroy airborne forces after they have been definitely located by the warning system. These teams, forming a mobile striking force, normally come from reserve units. Where time permits, the commander of this force prepares counterattack plans for likely landing areas within his area of responsibility. As the battle position is weakened when the mobile striking force is in use on this type mission, approval for its employment against an airborne landing must be

obtained from the next higher commander.

Infiltration attack: The defensive and security measures for an airborne attack will also in many cases take care of infiltration parties that penetrate our front lines. Preventing infiltration through front lines is the responsibility of the companies on the main line of resistance. This problem becomes more difficult at night and when occupying extended frontages. Measures to prevent infiltration in darkness should include:

Establishing listening posts along all likely avenues of approach.

Establishing a patrol system.

Using battlefield illumination and night vision devices.

Planning fires on all likely avenues of approach.

Using mines, booby traps, trip wires, tactical wire, and other obstacles to prevent the enemy freedom of movement and to force him into areas where we want him.

Guerilla attacks: Less likely to hit front-line positions than areas farther to the rear, guerilla attacks frequently can be met with the defensive and security measures that cope with airborne and infiltration attacks. However, in areas where the civilian population has not been evacuated, rigid control measures are required to insure that guerilla forces receive no help from civilians. Displaced persons present a problem, especially in those areas through which they move on their way to the rear. Commanders should set up control and search stations to apprehend guerilla forces moving through their areas disguised as civilians. All troops should be thoroughly indoctrinated with the fact that uncontrolled civilians within their areas of responsibility are dangerous and must be apprehended and turned over to higher headquarters for security check.

In summing up the defensive and security measures necessary to protect the battle position against airborne, infiltration, and guerilla attack, we need:

1. A communication and warning system.

2. An awareness by all units that they must provide their own initial protection and security and must be tied in with the local warning system.

3. Infantry-tank teams designated and prepared to destroy such enemy forces if located within our area of responsibility.

4. Special measures to guard against infiltration.

5. Special measures to prevent uncontrolled civilian movement through and within our defensive sector.

DIVISION REAR AREAS

Protecting the division rear area against airborne, infiltration, and guerilla attack is a much greater problem than protecting the battle position, since this area does not have the compact and well-knit defense we find on the battle position. Normally the division rear area does not have adequate forces to defend its entire area in depth. Therefore, rear area installations and troops are more vulnerable to all three of these attacks.

The division reserve in addition to its usual mission may also be charged with protecting the division rear area against airborne, infiltration, or guerilla forces.

The infantry battalion or regimental commander faced with this additional mission should generally follow the defensive and security measures discussed for the battle position. However, he will have the additional responsibility of integrating the defensive and security plans of division special troops and installations into his over-all plan. He does this by designating observation posts that are to be established and operated by the special troops near their installations and he sees that they are tied in with his communication system.

Augmented, when necessary, by motorized patrols, the warning system must be well coordinated and must provide visual coverage of all likely landing areas.

The reserve commander may recommend positions to be prepared and occupied by special troops in case of attack. These positions will be integrated into and will become part of his overall defense plan.

In planning communications, the reserve commander uses only a minimum of those organic to his force to tie in division special troops and installations. He needs the greater portion to execute his normal missions.

Again, as in the forward areas, all units and installations within the division rear area must provide their own initial security and protection against all three types of attacks. Infiltration units strike in rear areas with speed and ferocity. Usually the attack comes so fast and is over with so quickly that there is no time to send reinforcements from a centrally located area. No matter how elaborate the over-all plans may be for defending a rear area, local defense — the defense around each installation — must be good. It must be completely alert and able to react violently on little or no notice. There were instances in Korea where this ideal was not achieved and CP's and other rear area installations were wiped out in a matter of minutes.

Artillery units are prime objectives of infiltrators. They require a tight perimeter defense making maximum use of organic weapons.

Again repeating the pattern of plans for the forward areas, the division reserve commander designates a mobile Infantry-tank team, supported by artillery and mortars, that will be prepared to counterattack and destroy enemy forces after they have been definitely located within the area. *But major dependence must be placed on local defense.*

In general, the defense against airborne, infiltration, and guerilla attack on the battle position and in the division rear area requires all troops to remain initially in previously prepared positions. When the location and strength of enemy forces, either airborne, infiltration, or guerilla are determined, a force of sufficient size is dispatched to counterattack and destroy them.

SUMMARY

Defense against airborne, infiltration, and guerilla attacks requires observation and warning to off-set the attacker's advantage of surprise. All units, no matter where they are located, must provide their own initial security and protection. Once the attacking forces are located, we should have a mobile force immediately available

and capable of moving to destroy them.

The following problem is presented for your solution. It is designed to fix the foregoing principles in your mind by requiring your decisions as to defensive and security measures necessary to prevent or counteract attack of a battalion rear area.

1. General Situation: a. The 1st Battalion, 7th Infantry Regiment, part of a larger force, has organized its defensive sector as shown on Map 1.

b. The general outpost is now in contact with Aggressor forces and can be expected to hold until 2400 tonight.

2. Special Situation: At 0800 hours today Lt Col, 1st Battalion received the following message from C.O., 7th Infantry:

"Intelligence reports state that infiltration tactics employed by Aggressor and small guerilla actions by civilians played an important role in Aggressor's capture of the city of ESNEFED, located about 10 miles to the north off map. One Aggressor airborne battalion has been identified in the ESNEFED area. Transport aircraft have been identified landing on DEKKER STRIP also located in the ESNEFED area.

3. First Requirement: You are Lt Col, 1st Battalion. Listed below are several defensive and security measures, other than those listed on Map 1, which might be put into effect to protect your battalion area against possible airborne, infiltration, and guerilla attacks. Which of the following measures would you put into effect?

(To reader: Prepare notes outlining your reasons for rejection or adoption of the following measures, and check them against the solution that follows this requirement.)

a. Rifle units of the battalion to prepare and occupy additional defensive positions. If any, draw in locations on sketch.

b. Establish additional observation posts. If any, draw in locations on above sketch.

c. Direct S-2 to prepare patrol plans for foot and motorized patrols to cover the battalion area at irregular intervals.

d. Request higher headquarters to evacuate all civilians in the battalion area.

e. Change the present location of tanks employed in the reserve company area. If changed, draw in new location(s) on sketch.

f. Instruct Companies A and B to establish night listening posts forward of the MLR. Where will these posts be located?

g. Direct Companies A and B to block with trip flares, antipersonnel mines, and booby traps all avenues of approach into their areas that might be used by Aggressor at night. Indicate areas on sketch.

h. Move the 81-mm mortar platoon within the organized platoon area of the center platoon of the reserve company.

i. Direct the reserve company commander to be prepared to employ his company in a counterattack against likely airborne landings in the JEAN Ridge, WINK and KARL Hill areas.

j. Request artillery liaison officer to plan fires in the areas noted in **i** above.

k. Issue orders to the effect that movement within the battalion

LEGEND
HMG CAL .30, HV WPNS CO
LMG CAL .30, R CO
MEDIUM TANK
LMG CAL .30, HV WPNS CO
100 0 100 200 300 400
SCALE IN YARDS
N
WHITE RIDGE
ROACH HILL
WINK HILL
MILLAN HILL
JEAN
RIDGE
300
400
450
424

area, at night, be held to an absolute minimum, and that any necessary movement be coordinated by the S-2 with his patrol plans.

l. Direct S-4 to see that illuminating shells are available to all units.

m. Issue orders to units to shoot any civilians seen in the area.

n. Move the battalion aid station to a new location in vicinity of the battalion command post.

4. Solution and Discussion, First Requirement:

a. Solution: No.

Discussion: In this situation, positions already prepared provide adequate protection to the front, flanks, and rear of the battalion area. It is desirable, when an airborne threat exists, to be able to cover likely landing areas by direct as well as indirect fire. This can be accomplished from positions already prepared. The preparation of additional positions would not contribute further to the protection of the battalion area against infiltration or guerilla attacks.

b. Solution: Yes (See Map 2.)

Discussion: In a defensive situation when there is a definite threat from airborne, infiltration, or guerilla attack, each platoon occupying defensive positions should establish an observation post to be operated on a 24-hour basis. This is necessary to provide part of the local security for each position. These OP's, when tied into the battalion headquarters by communications, become part of the warning system of the battalion. In this situation, an additional OP should be established on MILLAN Hill to observe the area on the left flank.

c. Solution: Yes, foot patrols at night.

Discussion: Observation from OP's will be limited at night. A normal mission of OP's at night or during periods of low visibility is to maintain listening posts, especially against infiltrators and guerillas. Since auditory observation is more limited than visual observation, it becomes necessary to augment the observation posts with patrols during the dark. In front-line areas, foot patrols are more effective than motorized patrols.

d. Solution: Yes.

Discussion: When a serious threat exists from guerillas, civilians should be evacuated from front-line areas. The evacuation of civilians from the area will reduce this threat since guerillas depend to a great degree on civilian support.

e. Solution: No.

Discussion: Tanks are an effective weapon to employ against these attacks. If a threat develops that requires the use of tanks, they can be assembled in either of the platoon areas of the reserve company in a very few minutes.

f. Solution: Yes. (For positions, see Map 2.)

Discussion: In all defensive situations, listening posts are established to warn of enemy attack. These posts should cover likely avenues of enemy approach for night attacks. They should also cover approaches that patrols or infiltrating parties are likely to use in feeling out our position. Lt Col, 1st Battalion, visualizes that the six listening posts shown above would adequately cover the approaches leading into the battalion area.

g. Solution: Yes (For areas, see Map 2.)

LEGEND
HMG CAL .30, HV WPNS CO
LMG CAL .30, R CO
MEDIUM TANK
LMG CAL .30, HV WPNS CO
AREAS BLOCKED BY ANTIPERSONNEL MINES, BOOBYTRAPS AND TRIP FLARES.
LISTENING POST
100 0 100 200 300 400
SCALE IN YARDS
N
WHITE RIDGE
ROACH HILL
WINK HILL
MILLAN HILL
JEAN
RIDGE
BI
424

Discussion: Lt Col, 1st Battalion, in studying the terrain forward of the MLR, found four concealed approaches that might be used by infiltrating parties. These approaches are: the draw in front of the right platoon of Company A, the draw north of ROACH Hill, and the two draws that lead into Company B's area. If there is time enough, tactical and protective wire should be installed across the entire battalion area. However, additional protective measures should be taken to block the most likely avenues of enemy approach.

h. Solution: No.

Discussion: The platoon, from its present location, will receive some protection from the center platoon of the reserve company. This platoon, as well as all other units and installations in the battalion area, must provide its own initial protection and security. This is a principle that cannot be emphasized too strongly — local defense may afford the only opportunity to repel a swiftly striking enemy.

i. Solution: Yes.

Discussion: These areas are the most likely landing and drop zones in the battalion area of responsibility. In this situation the enemy has the capability of a battalion-size airborne attack. If an airborne landing is made in one of these areas, the commander should have a force prepared to counterattack to destroy the enemy.

j. Solution: Yes.

Discussion: Massed artillery fire in landing areas is very effective against parachutists. Artillery would also be required to support a counterattack if a large force is dropped in one of the areas.

k. Solution: Yes.

Discussion: Movement within the battalion area at night should be limited to that necessary for normal supply, administration, and patrol activities. All movement must be coordinated within the entire battalion area.

1. Solution: Yes.

Discussion: Illuminating devices of all types should be used to detect infiltrators or guerillas at night.

m. Solution: No.

Discussion: The threat from guerillas in this situation is not sufficient to warrant such action. The patrol and warning system should be sufficient to cope with civilians entering the battalion area after the initial evacuation.

n. Solution: Yes.

Discussion: This installation in its present location could be destroyed or seriously damaged if attacked by an infiltration party or guerilla band. When a serious threat exists from airborne, guerilla, or infiltration attacks, installations may be grouped for mutual protection. The movement of this installation to the vicinity of the battalion CP would not affect the medical support of the battalion.

5. Situation Continued: At 2330 hours, commander Company C reports that a five-man patrol from his company has contacted and is presently engaged in a fire fight with an Aggressor infiltrating party of approximately 20 men in the wooded area north of MILLAN Hill at the junction of the draw and trail near "A".

6. Second Requirement: You are Lt Col, 1st Battalion. What actions or orders will you issue concerning

the infiltrating party in rear of Company B?

7. Solution and Discussion, Second Requirement.

a. Solution: Order Company C to destroy this force. Notify Company B of the infiltrating party to its left rear and the action being taken to kill or capture this force. Have S2 notify regiment and all units and installations located in the battalion area of this infiltrating force and the action being taken to destroy it.

b. Discussion: A five-man patrol of Company C is now engaged with this force. Their location is definitely known. There is no indication of a situation on the MLR that would require employment of Company C in that area. A strong patrol should be able to kill or capture this force with little difficulty. To permit this enemy to escape and disperse within the battalion area of responsibility might well result in the enemy gaining valuable information concerning our troop dispositions and weapons, plus attacks on our installations, troops, and communications.

The preceding problem has illustrated some of the points you consider when planning to defend the rear of the battle position. With normally alert troops prepared to fight in any direction, defense of this area presents fewer problems than defending areas farther to the rear where the artillery, CP's, and administrative installations are located.

Defense of these areas in the division rear will be covered in a problem to be presented in the next issue of the QUARTERLY.

◆

Certainly the poise, confidence, and experience in management and leadership gained by our young Army commanders has positive value when they return to civilian life. As you will appreciate, American business and industry will always have room for hard-driving executives who can manage people and get things done. And this is the type of executive which Army leadership training develops."

Secretary of the Army Frank Pace, Jr.

SIGNS OF THE TIMES

By MAJ WILLIAM H. BARR, Infantry

Are you puzzled by some of the military symbols — particularly weapons symbols — appearing on maps in this issue of the QUARTERLY?

They're not the result of some Aggressor or CCF draftsman infiltrating into our art sections. They are the new symbols to be used not only by our military services but by all the armed forces of the North Atlantic Treaty Organization (NATO) nations.

Obviously, map reading in any interallied headquarters would be as time-consuming as a Korean armistice conference if it were not for some international set of signs and symbols.

There may not be agreement on a standard rifle but NATO military men have come up with an Esperanto of map sign language.

DA FM 21-30, *Military Symbols*, June 1951, is the new bible on the subject. It supersedes FM 21-30, *Conventional Signs, Military Symbols, and Abbreviations*, October 1943, and all its changes. You'll want to check the new FM for complete data.

However, to get you started and to help with your map reading in this issue, we'll point out a few of the changes in the more common symbols.

Take weapons — here you'll find the majority of differences between old and new symbols. While you'll still recognize them as representing weapons, they've undergone marked changes. You'll find the new manual lists two sets of symbols for most weapons. Because the QUARTERLY plans to use only one set, the alternate symbols are not covered in this article.

Weapons are now depicted by a "build-up" system. You start with a basic symbol indicating the purpose or the caliber of a type of weapon and add to it until you have a representation of a particular weapon. For instance, this is the basic symbol for an automatic weapon.

That straight, unadorned tailless arrow indicates a machine gun or an automatic rifle.* Notice in Figure 1 how the symbol is added to or changed for other automatic weapons.

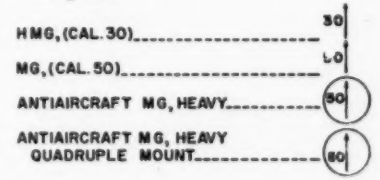

Figure 1. Automatic weapons symbols.

*The Infantry School has recommended adding the letters "AR" alongside this arrow to differentiate the automatic rifle from the air-cooled light machine gun.

To show any antitank weapon, you start with this as a base.

That's true of rocket launchers, recoilless rifles, and other antitank guns. Then the build up proceeds as in Figure 2.

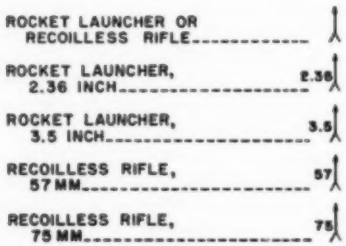

Figure 2. Rocket launcher and recoilless rifle symbols.

Mortars and other high angle-fire weapons have a circle for a base. A couple of mortar symbols appear in Figure 3.

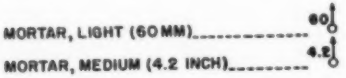

Figure 3. Mortar symbols.

Artillery howitzers use the circle base and certain other embellishments. Some of these are shown in Figure 4.

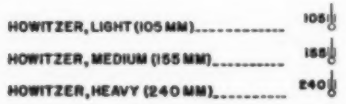

Figure 4. Howitzer symbols

Vehicle symbols show a marked change. No longer does a diamond-shaped parallelogram represent a tank. As shown in Figure 5, that vehicle has three new symbols to denote the three weight classifications.

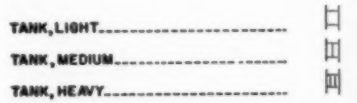

Figure 5. Tank symbols.

The basic symbols denoting military units show little change. Sizes of units are still indicated by dots, lines, and X's. The symbol inside the rectangle to designate branch of service has changed in only a few instances. Infantry remains the same — a rectangle with diagonal lines connecting the opposite corners. The engineer symbol has been changed from an upright "E" to an "E" lying on its face. The old signal designation, "S," has been changed to a lightning streak, a reasonable depiction of the occupation of our electronic brethren. These two symbols are shown in Figure 6.

Figure 6. Signal and engineer branch symbols.

There are many changes in the less-used symbols which space prohibits our publishing.

Until all the new symbols have been used long enough to guarantee

their recognition by our readers, the QUARTERLY will publish a legend with each map or drawing containing a new symbol. In the meantime, if you are puzzled by some new hieroglyphic in the maps you encounter, refer to FM 21-30, *Military Symbols*, June 1951.

INSTRUCTIONAL MATERIAL

As a service to its readers, the *Quarterly* regularly lists new instructional problems available through the Book Department, The Infantry School. All these problems contain lesson plans and narratives for the instructor. Additional items will be found on pages 54 and 112.

Problem #1102. **Mechanical Training, M1 Rifle.**

A four-hour problem containing general data; nomenclature; disassembly, assembly and functioning. Price, 6¢.

Problem #1103. **Mechanical Training and Marksmanship, M1 Rifle, Carbine M2.**

A four-hour problem on care, cleaning, operation, stoppages, immediate action. Effect of wind, sight changes and use of score book. Conference on known distance phase of TC#5, DA, 4 April 1950. General data; nomenclature; disassembly, assembly of barrel and receiver group, functioning of the carbine M2. Price, 6¢.

Problem #1108. **Mechanical Training, BAR.**

A four-hour problem on general data; nomenclature; disassembly, assembly of operating group and rate reducing groups; functioning of operating group; gas adjustment; stoppages, immediate action, and field expedients; spare parts and accessories. Price, 6¢.

Problem #1120. **Marksmanship, Preparatory Training, M1 Rifle.**

Four hours on sighting and aiming; adjustment of loop sling. Price, 6¢.

The above items may be ordered from
The Book Department, The Infantry School, Fort Benning, Georgia

ACK-ACK AND INFANTRY

By LT GEORGE C. DORSTE, Artillery

Figure 1. The two 40-mm guns of this M-19 antiaircraft weapon support attacking Infantry in Korea.

Having served as an Infantry platoon leader in Europe during World War II, I had my doubts about the new role for AAA automatic weapons in Korea. The phrase, "ground support of Infantry," struck me as being an invitation to disaster.

Why? Because the high silhouette, the loud engine noises, and the lack of thick armor plating seemed to rule out the use of M16's and M19's in forward areas. Also, our crews were trained primarily to engage aerial targets.

Once we tested the new mission in combat, however, everyone was sold on the ground support role.

Our first real test came when the 3d Infantry Division was engaged in northeast Korea. Two of our motorized columns, attempting to run supplies and reinforcements to a surrounded Infantry battalion, were stopped cold by enemy road

blocks. In the ensuing action at these road blocks, two things happened: the location earned the name "Ambush Alley;" the two columns lost heavily.

Another column was formed. This time an M16 half-track, mounting four .50 caliber machine guns, was pressed on a reluctant Infantry commander. This column hit another road block. But this time things were different. When the hundreds of howling North Koreans streamed down the hillsides — confident that they would annihilate our column — our lone M16 opened up.

Here was a WEAPON! Thousands of screaming, burning, richocheting slugs poured into the massed enemy! Our own troops, who were on the verge of breaking in the face of the tremendous odds, were tremendously encouraged and poured their own fire into the enemy. The result: mission accomplished with no further incidents, and another Infantry commander (as well as an Artillery commander) sold on the effectiveness of the M16.

Figure 2. Quadruple .50 caliber machine guns, covering an Infantry patrol, fire on Chinese Communist positions in Korea.

Another typical example of our antiaircraft automatic weapons in the Infantry support role came during the evacuation of Hungnam. A company-sized enemy force launched an attack on one portion of our perimeter. An M19 in support of our entrenched Infantry caught the enemy unit before it could come within range of our Infantry small arms.

The result was devastating. Seventy-five dismembered and broken bodies lay scattered on the

frozen ground. That action really sold the 3d Division on our "flak wagons."

The enemy custom of digging their emplacements into the hillsides makes flat trajectory weapons invaluable in Korea. "Ack-Ack" has those flat trajectory weapons. The extremely high rate of fire of just one weapon, to say nothing of the combined fire of one or more sections*, has a demoralizing effect on the enemy. AND an extremely encouraging effect on our own troops!

We now find that in every mission, whether offensive or defensive, the unit commanders urgently request one or more sections for ground support. Company sized patrols operating during daylight hours usually request a section.

I am not entirely convinced that our AAA automatic weapons would have achieved as much success under the conditions encountered in Europe during World War II as they do in Korea. I don't believe they would be as effective** against an enemy whose tactics differed from those of the Chinese Communists and the North Koreans. But I am certain that the fighting in Korea has produced a healthy respect for the M16 and the M19. Every Infantry, armored, or artillery unit that we have supported has called for us repeatedly on later occasions.

The final proof of this respect for our weapons lies in the fact that every operation order written in our division assigns some portion of our AAA AW (SP) Battalion to INFANTRY SUPPORT.

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*A section consists of one M16, mounting four .50 caliber machine guns, and one M19, carrying twin 40-mm guns.

**It is not clear from the writer's text whether he intends "effectiveness" to include "killing" effectiveness and/or "neutralizing" effectiveness. These weapons undoubtedly will kill more enemy when employed against mass attacks than against other tactics; however, the neutralizing effect may well be highly valuable against tactics other than those employing massed troops.

"It seems that we must learn and relearn with every war that the ultimate decision in war — and the greatest amount of risk — rests upon the foot soldier, who must meet the enemy face to face on the ground and contest him for the ground."

General J. Lawton Collins, 5 April 1951, before Senate Armed Services Committee

HOLD IT TIGHT!

By MAJOR WARREN P. DAVIS, Infantry

EDITOR'S NOTE: *This article is based on the pistol marksmanship course as taught at The Infantry School. In some cases it varies from the techniques prescribed in FM 23-35,* Pistols and Revolvers. *It is anticipated that when this manual is revised these differences will be reconciled.*

The .45 pistol, for its purpose, is the *very best* weapon in the Army. Yet it is the most misunderstood of all weapons. Many a soldier claims he can throw it better than shoot it; that, admittedly, it hits hard, but what can it hit? Such expressions of frustration are the result of ignorance. The man who says he *can't* shoot the pistol accurately is a man who doesn't know how to shoot it properly.

Many pistols have been tested, including enemy weapons of World War II, and our .45 caliber pistol heads the list as the *finest service pistol in use today.* Its accuracy, combined with its dependability and firepower is unparalleled. When fired properly, in circumstances for which it was designed, it is a soldier's best friend. A hit from its heavy bullet will stop any enemy. And, when aimed properly, it *will* hit its target. It is dependable. Stoppages are extremely rare if the weapon is cared for properly. And, its rate of fire is limited only by the state of training of its user.

Unlike most infantry weapons, the pistol is designed primarily for defensive use. Its job is to protect the life of the man armed with it. It performs admirably in the hands of men who know how to use it. Since it is an individual defensive weapon, what could be more logical than to learn how to shoot it well?

You can learn how to do it. The Infantry School teaches thousands to become accurate pistol shots. The principles involved are those used by internationally famous pistol experts. They differ from methods taught in the past but are so successful that, by following them, *you will become a better pistol shot* and, you will be convinced that *the average person can shoot our service pistol well!*

MARKSMANSHIP TRAINING

The seven steps of pistol preparatory marksmanship are:

1. Aiming exercises
2. Position exercises
3. Trigger-squeeze exercises
4. Timed fire exercises
5. Sustained-fire exercises
6. Quick-fire exercises
7. Examination.

Notice that the first three steps and the last one are identical with those taught for the rifle, carbine, and BAR.

In the first step, the instructor uses the same training aids used in

preparatory marksmanship training on other individual weapons. First is the large sight - picture model. Remember it from the M1 rifle instruction? Next is the familiar sighting bar. This one has an open rear sight — like the sight on the pistol. (See Figure 1.)

Figure 1. Pistol marksmanship sighting bar.

Remember the second sighting and aiming exercise with the rifle? The rifle was wedged in a box and pointed toward a sheet of paper on another box 50 feet away where a movable bull's-eye simulated a target. The coach then set up a realistic, correct sight picture for his pupil to study. The same principle is used for the pistol except that a stand holds the weapon. (See Figure 2.)

In the third exercise, just as with the rifle, carbine, etc., the student makes 3-shot groups using the rest, a 5-inch movable bull's-eye and a pencil to mark the paper through the center of the bull's-eye.

The most important part of pistol aiming is *aligning the front and rear sights.* These sights are only seven inches apart. At 25 yards or 900 inches, minor errors in sight alignment are magnified 129 times when the bullet hits the target. A one-tenth inch error in alignment, so easy to make, will cause the bullet to hit the target almost 13 inches from the center.

In Figure 3 you see a perfect sight picture. Actually, you'll never see it this way while aiming the

Figure 2. Pistol stand for shot group exercise.

pistol. You know that you can't hold the pistol perfectly steady as shown in the figure. However, don't worry about the pistol wiggling up and down and from side to side. As

long *as your sights are aligned* the weapon can move around in a 5-inch circle and still get a bull's-eye. (See Figure 4.) Strive only to keep both sights aligned and aim in the general area shown in Figure 4.

Figure 3. Theoretically perfect sight picture — sights properly aligned and in proper relation to the target; both target and sights in focus. Such a sight picture cannot be obtained. The human eye will not focus simultaneously on an object as near as the pistol and as distant as the target. The focus will be either on the pistol or on the target — not on both at once.

Know how to use your eyes, and sighting loses much of its difficulty. Many men try to look at the sights and the target at the same time, a physical impossibility. It's possible to focus either on the target or on the sights — not on both. Since the most important part of pistol aiming is aligning the front and rear sights, *focus your eye on the sights.* In this way you see them clearly defined and sharp — and you can align them perfectly. The bull's-eye should be seen *out of focus.* (See Figure 5.)

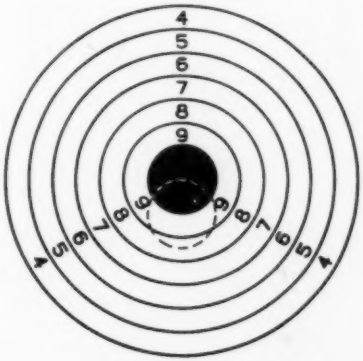

Figure 4. If pistol sights remain in alignment and the point of aim is within the dotted-line circle, each shot will be a bullseye.

Holding the pistol is step two. There is only ONE correct way to hold it. First, holding it by the slide in the left hand, muzzle upward, force it back into the crotch formed by the thumb and trigger finger of the right hand so that the grip safety is centered in the crotch. While the left hand continues to press the pistol firmly into the crotch of the right, wrap the lower two fingers of the right hand firmly around the grip. (See Figure 6a.) Now with the left hand, force the

second finger of the right hand around the grip between the trigger guard and the lower fingers. (See Figure 6b.) These three fingers hold the weapon tightly. Next, lay the thumb of the right hand on the upper edge of the stock so that its base is just under the safety and its pad is upon the top edge of the stock pressing down and to the

Figure 5. This is a correct sight picture — sights sharply in focus and in perfect alignment, target blurred because the marksman's eye is focused on his sights.

right. (See Figure 7.) The position of this thumb is of the utmost importance. *It must be exactly as shown and it must press down and to the right.* (See Figure 8.)

Hold the pistol tightly. This controls movement and allows the entire right arm to absorb the recoil. With a loose grip the hand and arm do not absorb the recoil the same for each shot and, as the grip will change between shots, shot groups will be large. The harder you can grip the pistol, without trembling, the better chance you have of holding it on the target while applying trigger pressure.

Now insert the trigger finger into the trigger guard so that the trigger touches the finger anywhere on the finger pad. (The pad is the fleshy portion of the finger from the first joint to the tip.) Use only the pad of your finger to squeeze the trigger (See Figure 9.) Use of the pad on this first phalanx or section of the finger allows you to squeeze the trigger straight to the rear and prevents the base of the finger from pushing against the receiver as the finger tip moves to the rear. Every finger except the trigger finger continues holding the pistol tightly and the thumb is firmly in position on top of the grip.

The correct firing position is the next step to be learned. Face the target then move the feet so that you face about half way to the left. Spread the feet a comfortable distance apart and extend the right arm toward the target. Adjust your feet to a position that permits the arm to aim at the target without any feeling of muscle strain. Note in Figure 10 that the weight of the demonstrator's body is evenly distributed on both feet, his head is erect and there is no pronounced leaning at his waist. His left hand is comfortably placed in his pocket. His right arm is fully extended so

that the elbow is straight but not "locked."

As the demonstrator raises his arm in Figure 11, notice that the slide of the pistol is on the same line as his arm. When he points his arm toward the target, he points the muzzle in the same direction. His wrist is straight and he never bends it. In this manner, when the pistol is fired, the entire arm absorbs the recoil. This reduces the "jump" and enables the firer to assume a good tight grip without muscle strain.

The demonstrator has assumed the position of "raise pistol" in Figure 12. This is the standard position of rest during pistol firing. It relaxes the muscles of the shoulder and the arm while maintaining safety for the firer and other personnel on the range. The pistol is held just in front of the right shoulder, muzzle upward and down range. The wrist is still straight; it has not been bent.

The weapon is cleared while at "raise pistol." To clear it, press in on the magazine catch with the right thumb and drop the magazine into the left hand. Place the magazine on the rest or in the belt, draw the slide to the rear and lock it rearward by pressing upward on the slide stop with the right thumb.

Trigger squeeze is the next step in learning pistol marksmanship.

Figure 6a. While the left hand continues to press the pistol firmly into the crotch of the right, wrap the lower two fingers of the right hand firmly around the grip.

Figure 6b. With the left hand force the second finger of the right hand around the grip between the trigger guard and the lower fingers.

It is by far the most important of all the steps. No matter how good your grip is and how perfectly your sights are lined up, a poor shot will result IF the trigger is squeezed improperly. Small errors in grip and aim can be tolerated and a fair shot will result *but the slightest error in trigger squeeze will cause the wildest possible shot on the target.*

pistol tightly, does not move. "Straight to the rear" means that finger pressure on the trigger is right straight back in the same plane as the axis of the barrel. Any sidewise pressure on the trigger is transmitted to the entire pistol when the hammer is released causing the sight alignment to be thrown off while the hammer is falling to strike the firing pin.

Figure 7. Lay the thumb of the right hand on the upper edge of the stock so that its base is just under the safety and its pad is upon the top edge of the stock pressing down and to the right.

Trigger squeeze is defined as "the independent movement of the trigger finger straight to the rear, with a uniformly increasing pressure on the trigger, applied so that you do not know the instant the pistol will fire." This is the same definition you heard for the M1 rifle.

"Independent movement" means that only the trigger finger moves. The rest of the hand, holding the

The pistol cannot be held for as long or as steadily as a rifle, so the sequence employed in trigger squeeze is a little different. As the arm is extended toward the target, take up the slack. Take a normal breath, exhale a little, then stop breathing. Align the sights, complete the sight picture, and begin a steady increase in pressure on the trigger. As long as your sights

are aligned, increase the pressure. If the pistol does not fire in a reasonable period of time (6-8 seconds) take your finger out of the trigger guard, come to raise pistol, put on the safety with the left hand, and rest.

Figure 13, a model used in teaching pistol functioning, shows the parts affected by movement of the trigger. An arrow points to the sear notch in the hammer and you can see that the sear is caught in the notch, holding the hammer in the cocked position. All of this trigger discussion is about the delicate art

Figure 8. The thumb must press down and to the right.

of sliding the sear nose out of the hammer notch without disturbing sight alignment. Actually that nose travels less than 1/100 of an inch. But, moving it out of the notch to allow the hammer to fall is your greatest problem in shooting, requiring studied and careful practice.

Trigger squeeze exercises prepare the student for actual firing. These are the steps in the exercises: First, stand in the correct position and at raise pistol. Check the grip until perfected. Then, with the left

Figure 9. Use only the pad of your finger to squeeze the trigger.

thumb, cock the hammer. Extend the arm toward the target and take up the slack. As you stop breathing, align the sights and begin a steady increase in pressure on the trigger. When the hammer falls, call the shot, come to raise pistol, and hold the weapon with the left hand to relax the right. If any strain has been noted, readjust the position of the feet.

Exercise for about 10 minutes, then coach and pupil change over. During this exercise be careful to practice good habits. For example, when you see the shot wouldn't be good because of nervousness or fatigue, do not pull the trigger — come to raise pistol and rest. De-

velop this resting habit. It is a good preventive for "trigger jerking."

Look at the position of the coach in Figure 14. He's on the pupil's

Figure 10. Firing position.

left side and just about opposite his right elbow. Note particularly where he's looking — directly at the pistol. From time to time he checks the pupil's position but during all trigger squeeze practice he watches the pistol. One of the surest signs of an improper squeeze or a jerk that he will observe is a downward dip of the muzzle.

If you have studied a used target, you've noticed that the formation and location of shot groups tell a rather complete story of the firer's ability or his faults. The art of reading a target is called "target appreciation."

Figure 15 shows the most popular areas in a target. The shaded area above and to the right of the bull's-eye shows the results of "heeling." A shot group here indicates the firer involuntarily increased pressure on the pistol with the heel of his hand instead of the trigger finger. The correction is simple. Stop pressing with the heel of the hand and employ that "independent motion of the trigger finger straight to the rear."

Figure 11. The slide is on the same line as the marksman's arm.

The dotted portion to the left and below the bull's-eye is a *very popular* area. Shots form a group here as a result of jerking the trig-

ger. To avoid this area, stop trigger jerking.

Then there's the balance of the target — 36 square feet of it. Shots will land anywhere on it if sight alignment is imperfect. If shots appear generally all over the target, it means that sight alignment is poor.

Figure 12. "Raise pistol" position.

The checkered area shows where the shots will hit if you fire correctly. A skillful shot will keep every shot within the bull's-eye and 9 ring while a beginner, using correct technique, will keep all his shots within the checkered zone.

To start actual firing, begin with the "ball and dummy" method. The firer stands at raise pistol with the coach alongside him in the correct coaching position. On the command "load," the coach takes the pistol, holding it so the muzzle is up in the air and pointing down range. The firer turns his head to the left and downward so that he cannot watch the coach. The coach has in his

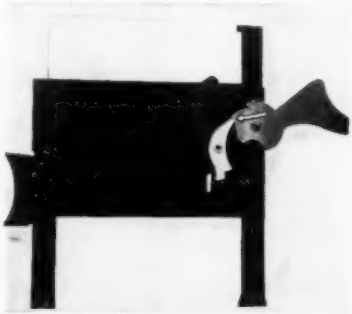

Figure 13. This model of the pistol mechanism shows the parts affected by trigger movement.

pockets five loose cartridges. He inserts the empty magazine in the pistol. He then either inserts a live round in the ejection port or simulates inserting a live round. Pressing with his thumb on the slide stop, he closes the slide and puts the safety on. He hands the pistol to the pupil who, not knowing whether the weapon holds a live round or not, accepts it at raise pistol, takes a good grip, and carefully fires the first shot. The coach carefully observes the trigger squeeze. If the

pistol is empty, he can easily tell by its movement or lack of movement whether or not the trigger squeeze is perfect. Each time the hammer falls, regardless of wheth-

Figure 14. The coach watches the pistol during trigger squeeze.

er the weapon is fired, the coach requires the firer to call the shot.

Trigger squeeze is further developed during this exercise. The coach can do his best work when the pistol is fired with an empty chamber. He can easily check the trigger squeeze. Also the pupil more readily realizes that he has jerked the trigger, when he sees the front sight pulled downward.

Each time the firer calls his shot, he comes to raise pistol. If the slide is not open, he pulls it to the rear. The coach again takes the pistol and either loads a live round or simulates loading. With the slide forward and the safety on, he returns it to the firer. Again the grip is taken, safety released with the left hand, and aim is taken.

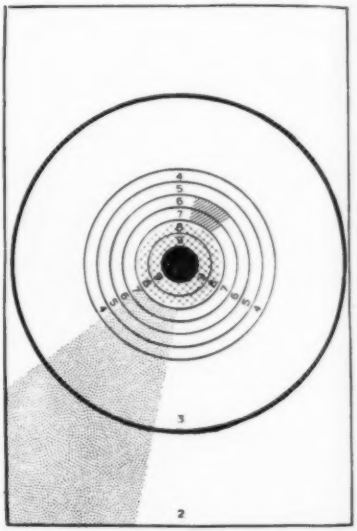

Figure 15. "Heeling" results in shot groups in the shaded area above and to the right of the bullseye. Jerking the trigger will place shots anywhere in the large area below and to the left of the bullseye. Proper trigger manipulation and sight alignment will result in shots in the checkered area in and around the bullseye.

Eight minutes are allowed to fire the five rounds. After "commence firing" is given coaches keep track of the time, then follow the ball and dummy procedure, holding

back at least one live round until the eight minutes are almost passed. Repeat this exercise twice.

In sustained fire, Step 5, five rounds are fired in 12 seconds at a range of 15 yards; and five rounds in 15 seconds at 25 yards. As this time is short, the firer holds his breath throughout the five shot exercise. The mere mention of a time limit causes many individuals to worry about time and as a result, they jerk their triggers in an effort to shoot rapidly. This all too-human reaction can be overcome by practice.

This exercise is fired without ammunition. To simulate action of the pistol, each time the hammer falls the coach taps the palm of his left hand against the bottom of the stock to simulate recoil and at the same time cocks the pistol by striking the hammer with the edge of his right palm.

Quick fire exercises, the sixth step is conducted using the "E," or bobbing, target. This target is edged toward the firing line for three seconds and then faced toward the line for three seconds. The process is continued for five shots. There is no specific aiming point on the target — so you aim at the center of mass while maintaining a *perfect sight alignment.* Be sure to use most of the three seconds to fire each shot.

In conducting the examination step, the county fair method is recommended.

(For convenience of instructors a lesson plan is included at the end of this article.)

If it is possible in your unit to teach pistol marksmanship on the range (as is done at The Infantry School) you can teach and practice the first three steps, then fire, using the ball and dummy method. When proficiency is achieved in slow fire, teach steps four, five, and six on the range, and practice on the range. Using this method, step seven (the examination) is accomplished by observing troop performance on the targets thus eliminating the need for a county fair or similar type examination.

PISTOL SCORE CARD
THE INFANTRY SCHOOL

LAST NAME FIRST NAME MIDDLE INITIAL

ROSTER NO. ASN

TARGET NO. ORDER NO. CLASS NO.

RECORD PRACTICE

TABLE V — TIMED FIRE — TARGET L

15 Yds.	2 Min. 30 Sec.						

Total Timed Fire

TABLE VI — SUSTAINED FIRE — TARGET L

15 Yds.	10 Sec.						
25 Yds.	15 Sec.						

Total Sustained Fire

TABLE VII — QUICK FIRE

TARGET E — BOBBING

25 Yds.	5 Sec. per Shot						

Total Quick Fire

Total Score

CERTIFIED CORRECT

SIGNATURE OF SCORER QUALIFICATION

SIGNATURE OF FIRER RATE

SIGNATURE OF OFFICER

CLASSIFICATION: EXP. 250 S.S. 240 M.M. 210

Figure 16. Pistol score card.

Figure 16 shows the score card used at The Infantry School in firing the qualification course. This gives the complete information as to ranges fired, number of shots, and time limits. WDAGO Form 88 "Pistol Scorecard," is available to units for record firing.

The .45 caliber pistol is a good weapon. It's the best money can buy for its intended purpose. If your men are having difficulty qualifying with the .45 use this method to teach them. *It works!*

For your convenience in preparing marksmanship instruction the following lesson plan will help you cut down on preparation time, and guide you through the various phases of pistol marksmanship instruction.

Remember, however, that excellent shooting is a great deal like excellent golfing. You can't take lessons and then just practice once a year. Excellent performance requires continuous practice throughout the entire year. For this purpose units should make pistols available in squad rooms for daily dry practice during firing seasons.

LESSON PLAN

Preparatory Marksmanship and Familiarization Firing, Automatic Pistol, M1911A1

Title of Course: Preparatory Marksmanship, Automatic Pistol

Total Hours: 12

Purpose: To teach the student preparatory marksmanship training with the pistol and to fire a familiarization course with the pistol.

Text Assignment: FM 23-35 and April 1952 issue, INFANTRY SCHOOL QUARTERLY.

Students Bring to Class: Paper, Pencil, Clipboard

Instructor's Reference: Same as text assignment

Training Aids: Pistols (1 per two students)
Magazines (2 per weapon plus 15)
Demonstration magazines for preparatory marksmanship (2)
Ammunition for class (20 rounds per student plus 300)
Ammunition for demonstration (300 rounds)
Carbide lamps (6)
Target showing "jerking" and "heeling" areas (1)
Sight picture model (1)
Pistol functioning model (1)
Sighting and aiming bar complete (1 per two students)
Red poster paint and small ¼" brush (1)
Aiming disk (1 per two students)
Pistol rest (1 per two students)
Easel with "L" center and blank sheet of paper (1 per two students)
Red flag (1)
Score card (1 per student)
Enlarged score card training aid (1)
Stop watch (1)
Whistle (1)
First aid box (1)
Spare parts box (1)
Cleaning rods (10)
Patches and waste
Chalk
Trash boxes
Brass boxes
Pointer (1)
Hammer (1)
Axe (1)
"L" targets (1 per point)
"E" silhouette targets for demonstration (6)
"E" silhouette targets bobbing,

for demonstration (2)
"E" silhouette targets bobbing (1 per point)
Tables (1 per 2 points plus 1 for principal instructor)

Issue Materials: Pistol score card
Assistant Instructors: 2 demonstrators
Supervisory Personnel for Practical Exercise

TIME BREAKDOWN

Time	*Type of Instruction*	*Description*
1st Hour	Conference, demonstration	Introduction to preparatory marksmanship, sighting and aiming, position exercise, trigger squeeze exercise.
2d Hour	Conference, demonstration, practical exercise	Trigger squeeze, target appreciation, explanation of ball and dummy method.
3d Hour	Conference, demonstration, practical exercise	Slowfire, 15 yards, using ball and dummy method.
4th Hour	Conference, demonstration, practical exercise	Slowfire, 25 yards, using ball and dummy method.
5th Hour	Conference, demonstration, practical exercise	Sustained fire, quick fire, dry work, explanation of qualification course.
6th Hour	Practical exercise	Sustained fire 15 and 25 yards.
7th Hour	Conference, demonstration, practical exercise	Timed fire 15 and 25 yards.
8th Hour	Conference, demonstration, practical exercise	Sustained fire 15 and 25 yards.
9-12 Hours	Practical Exercise Record firing	Quick fire 25 yards.

LESSON OUTLINE

1. **INTRODUCTION:** 1st three steps of marksmanship (50 min.)
   a. Introduction to pistol marksmanship, seven steps.
   b. Sighting training, stress sight alignment and eye focus.
   c. Grip and firing position, stress right thumb.
   d. Raise pistol, brief conference.
   e. Trigger squeeze, duties of coach.
2. **TRIGGER SQUEEZE EXERCISE:** Target appreciation (50 min.)
   a. Grip, position and trigger squeeze exercise.
   b. Conference covering target appreciation, ball and dummy method.
3. **SLOWFIRE PRACTICE:** 15 yards and 25 yards. (85 min.)
   a. Four orders fire 15 yards ball and dummy.
   b. Four orders fire 25 yards ball and dummy.
4. **TIMED FIRE, SUSTAINED FIRE, QUICK FIRE, QUALIFICATION COURSE** (20 min.)
   a. Conference covering timed fire, sustained fire, quick fire and qualification course.
   b. Demonstration of qualification course.
   c. Police range, inspect class for ammunition.

LET'S *STREAMLINE* AIR MOVEMENT

By MAJOR JAMES K. COCKRELL, Infantry

The ideas expressed in this article are those of the author although The Infantry School acknowledges that an airborne movement of the type described by Major Cockrell could conceivably be made in six hours. However, such speed would require considerable prior planning by higher headquarters, full logistical support, prior and complete liaison with Troop Carrier Command, and previously marshalled aircraft.

You don't move troops by air if you have time to waste. Yet we waste time prodigally with our methods of planning, marshalling and loading for an air movement.

The staff procedures for planning are sound; but they require a lot of detailed, time-consuming work at company and battalion level, work that *could* be done at a higher level in much less time. And the generally accepted methods of marshalling and loading for air movement waste time by decentralizing control down to the company level.

True, decentralization and delegation of work is a basic principle of command, but in air movement it requires long, detailed advance planning.

Most units have set up SOP's to cover all details of planning.

If there's enough time, of course, these SOP's are hard to beat; they have been worked out over a period of years, tested in combat and maneuvers, and we know that they'll work. But we also know that an air movement cannot be planned and executed both rapidly and efficiently if they are used; too many forms must be filled out, too many plans must be made and coordinated, too many orders must be issued.

For example, every company must fill out a Basic Planning Guide, and these must be consolidated at battalion and regiment; then Aircraft Allocation Tables, Air Movement Tables, Aircraft Loading Tables, and Flight Manifests must be prepared at various levels. And there has to be a plan for movement to the departure airfield, a marshalling plan, aircraft parking diagrams, and a lot of detailed coordination with the Air Force to get these plans finished. The mere mechanical process of typing, mimeographing, and distributing any one of them takes hours.

If you have days to spare, use all these steps. But sometimes you may have as little as six hours to alert your people, make your plans, move to the airfield, load, and take off. And remember, there's always that old army expression, "move with the least possible delay."

It is for these cases that we need a *streamlined* procedure for air movement; an SOP that will help a commander and staff to take, in the proper order, those steps that

are *absolutely necessary* to get the unit ready to fly and to plan and control marshalling and loading for the move.

Here is one solution to the problem. The details can be varied in an infinite number of ways to suit unit SOP's, personalities of commanders, abilities of particular staff officers, etc. Because it is designed around the time factor, the SOP lists actions required in their chronological order.

For the purposes of this problem we will assume that our regiment, the 1st Infantry, is in a rear area located within one hour's march from airfield Chicago. All units are present in the area and several days' ammunition and rations are available in the area. Division headquarters has been anticipating some type of air movement for several days, and complete liaison has been established with the Air Force commander at airfield Chicago. The division stands ready to lend full logistical support to the regiment.

1. Receipt of The Alert — "This is an alert for movement; 1st Infantry prepare to move by air from airfield CHICAGO to Airstrip I within six hours after receipt of this message. Fifty-one C-54 and 21 C-119 aircraft will be available. One battalion must be available for combat within 30 minutes after landing. Details follow."

When a message like this arrives at a regimental CP things will have to start happening fast if the fighting elements of the regiment are going to be loaded, ready to take off, in six hours. Let's see what the unit staff should do:

2. Initial Staff Actions:

S1: 1. Call the battalion adjutants and separate company commanders and require a report by telephone within 30 minutes of any changes to the "present-for-duty" figure in the latest status report. Tell them the number of men per company to be left as rear detail.

2. Call the headquarters commandant and tell him to start preparing the headquarters for movement. Get the forward echelon ready before starting on the rear echelon.

S2: 1. Contact higher headquarters to get all possible information on the area to which the unit is moving, and request maps of the new area.

2. Call the battalion S2's and coordinate implementation of the unit's security SOP for movements.

S3: 1. Call the MTO and ask for a telephone report within 30 minutes on the number of operable vehicles by types, and the additional number that can be ready in one hour, two hours, three hours, etc. Tell the MTO to start preparing all operable vehicles for air movement, and have him notify each company which of its men will be needed as drivers, assistant drivers, and maintenance personnel.

2. Call the battalion S3's and separate company commanders, notify them of the alert, and give them a time by which all troops and crew-served weapons must be

ready to move. For this preparation they should be given about one-fifth of the time remaining before departure. Issue of ammunition and individual rations will probably not be possible within this period of time, but it must be done before troops leave unit areas. Normally, in a move such as this, the only rations taken will be individual rations carried by each man.

3. Start S3 section personnel working on a breakdown of the aircraft that will be available to see how many vehicles can be taken after the personnel are loaded. (In this case, after filling up the C-54's with troops, and spreading the remainder through the C-119's, they can tell fairly accurately how much room is left for jeeps, ¾- and 2½-ton trucks, and trailers.)

4. Send a liaison officer to the departure airfield to find out and report the following by phone or radio. (He will remain at the field to brief the control officer.)
   a. Location of marshalling space for troops and vehicles. (Since marshalling will be very brief, and control very important, a small open area near the aircraft loading area is best.)
   b. Communications available between marshalling area and present regimental CP.
   c. Time and place aircraft will be available for loading. (Liaison officer must know order in which aircraft will depart.)
   d. Stations time(s) hour(s) by which troops and vehicles must be loaded in aircraft, ready to take off.
   e. Maximum payload (allowable cargo load) for each type airplane for this operation.
   f. Availability of loading materials and flight safety equipment — tie-down devices, parachutes, etc. (This duplicates the S4's efforts to some extent but the importance of the equipment justifies such a duplication.)
   g. Other relatively minor details, such as traffic control to the marshalling area and on the airfield, number of copies of manifests required and who will pick them up, and rules for conduct of troops in flight.

5. Dispatch a liaison officer to higher headquarters to determine:
   a. Details of the mission.
   b. Information of the destination airfield to include dispersal areas available.
   c. Administrative and supply details for the movement.

S4: 1. Request from higher headquarters necessary transportation to move personnel of the regiment to the airfield.

2. Check with higher headquarters as to the availability in all aircraft of the following:
   a. Tie-down equipment for vehicles (ropes, chains, or cables).
   b. Load spreaders for 2½-ton trucks.
   c. Parachutes for personnel.

d. Life preservers for personnel (if the flight is over water).

e. Loading ramps.

Ask higher headquarters for help if any of these items are lacking.

3. Arrange to draw a basic load of ammunition and three days' individual rations, unless these items are already on hand.

COMMUNICATION OFFICER:

1. Call higher headquarters and ascertain the SOI* to be used in the new area.
2. Draw enough batteries to have two spares for each battery-operated radio in the regiment and draw any wire needed to fill authorized allowances.
3. Provide radio vehicles and operators for the liaison officers who will go to the departure airfield and higher headquarters, and open a regimental liaison net.

As soon as the staff officers have taken these steps to start the preparation machinery in motion, hold a staff meeting. All the above staff officers should attend, plus the regimental commander, executive officer, and headquarters commandant. Decisions should be reached on the following points:

1. The priority to be given to various types of vehicles (radio, wire, weapons carriers, command, supply, kitchen, etc.)
2. Whether all available troops will move, or whether some troops will remain behind with the vehicles not taken. (For instance, the Service Platoon of Service Company.)
3. Any changes to be made in the normal combat uniform and equipment carried by the troops, amounts of rations and ammunition to be taken, and any special supplies and equipment needed.
4. Messing arrangements to be made prior to stations time. (After that time individual rations must be used.)
5. The order in which units should arrive at the destination.
6. Tentative schedule for and method of movement to the departure airfield. (Depends on movement time to the airfield, time aircraft will be available for loading, and stations time. *Actual loading time*, not counting time to assign men and vehicles to aircraft and move to the aircraft, should be 20 minutes for troops and 30 minutes for vehicles.)
7. Control methods to be used at the marshalling area and designation of control officer who will assign troops and vehicles to load in specific aircraft.
8. Attachments of units, if any (medical platoons, etc.)
9. The time of the meeting of the regimental staff and battalion and separate company commanders and their staffs at which the movement order will be issued. This time should be selected so as to leave at least one hour be-

*SOI — Signal Operation Instructions.

tween the end of the meeting and the departure of the first troops for the marshalling area.

Following this meeting the unit staff completes the following preparations:

S1: 1. Turns over to the personnel officer (or whoever is designated S1 of the rear detail) all matters not pertaining to the move.

2. Supervises headquarters commandant's preparation of the rest of the headquarters for movement.

S2: 1. Continues to gather information on weather, terrain, and enemy at the destination.

2. Checks implementation of security measures.

3. Distributes maps of destination.

4. Conducts and/or supervises any possible briefing.

S3: 1. Completes aircraft allocation plans. These plans will of necessity be much less detailed than would have been the case if there had been ample time. Under these circumstances, however, plans look something like this (it will be normal in so hurried a movement for all companies to have less than T/O&E strength available for the move):

First 19 C-54s — A, B, C, D Company troops (less drivers) plus 80 troops of 1st Bn Hq Co and 45 troops of Hq & Hq Co.

Next 18 C-54s — E, F, G, H Company troops (less drivers) plus 85 troops of 2d Bn Hq Co.

Last 14 C-54s — I, K, L Company troops (less drivers) plus 78 troops of 3d Bn Hq Co.

First 3 C-119s — 9 jeeps and trailers (radio jeep, wire jeep, litter jeep, and six weapons carriers) and 18* troops from D Company and Hq Co 1st Bn.

Next 2 C-119s — 6 jeeps and trailers from Hq & Hq Co and 12* troops from Hq & Hq Co.

Next 3 C-119s — 3 ¾-ton trucks with 1-ton trailers and 54 troops from Heavy Mortar Co.

Next 3 C-119s — 9 jeeps and trailers from H Co and Hq Co 2d Bn and 18* troops from H Co and Hq Co 2d Bn.

Next 3 C-119s — 9 jeeps and trailers from M Co and Hq Co 3d Bn.

Next 7 C-119s — 4 2½-ton trucks with 1-ton trailers from Service Company (ammunition) and 240 troops from M Co, Sv Co, Hq & Hq Co, and Medical Co.

2. Advises MTO what vehicles will be taken. (Spares of all kinds should be taken to the airfield.)

3. Completes plans for actual loading. Normally the method entailing least planning and preparation time is as follows: The control officer moves to the departure air-

*All these troops are drivers and assistant drivers.

field as soon as the plan is firm, coordinates it with the Air Force, and orients his guides. Using the plan shown above, he meets each unit as it arrives in the marshalling area (units will arrive in the order of enplaning), assigns it to the planes in which it will load, and has it guided to those planes. For example, as the 1st Bn arrives the control officer would assign 40 personnel of A Co to the first C-54, 40 to the second, 40 to the third, and 34 of A Co and 6 of B Co to the fourth (assuming that A Co had 154 officers and men to move) and so on. In the case of C-119's he would assign the exact vehicles to load in each airplane; for instance, two jeeps and trailers from D Co loaded with 75's and 81-mm mortars, one radio jeep and trailer from Hq Co 1st Bn, and drivers and assistant drivers for each jeep.

4. The company commander of each company would actually select the men to go in each aircraft on the spot. As far as the troops are concerned, in fact, the loading would be handled very much like a truck move.

5. The vehicles, on the other hand, are handled on a strictly priority basis, so that if planes are short, or must be loaded lighter than anticipated, the vehicles left off are those least needed. Also, the first to arrive will be the ones needed most.

6. The one difficulty in such a procedure is that manifests cannot be prepared in advance. However, if sufficient copies of any flight manifest form (Air Force or Army) and plenty of carbon paper are available, the senior officer or NCO in each aircraft can make out a satisfactory manifest in fifteen minutes or less. Some planes may not be perfectly balanced but still within flyable limits, and some may end up not fully loaded, but some sacrifices must be made to obtain speed.

7. Completes plans for unloading and dispersal of troops at the destination, and resumption of control by regimental headquarters.

8. Coordinates with the communication officer on communication arrangements at the departure and destination airfields.

9. Determines whether Army aircraft can fly to the destination, and if not (due to a long over-water flight, high mountains, etc.), sees if they can be towed. If not, asks the regimental commander if he wants to transport one or more in C-119's.

S4: 1. Completes plan of movement to departure airfield.

2. Completes issue of ammunition and rations.

3. Insures that any major items that are short are replaced.

4. Sees that sufficient amounts of water and gasoline are loaded on unit transportation.

5. Determines when, where, and how supplies will be obtained

at destination area. (By issue there, air resupply by the regiment, air resupply by higher headquarters, etc.)

COMMUNICATION OFFICER:

1. Notifies units of SOI in use, nets to be opened, planned CP location.
2. Checks distribution of batteries.

While the above is in progress the unit commander's meeting will be held and each staff officer concerned will present his part of the plan. A written order will *not* be published in a move as rapid as this.

Once the regiment leaves its area the success of its movement is to a great extent dependent on the plans and preparations already made. Loading time will be short, and communication facilities at the airfield will rarely permit much last-minute changing of plans and correction of errors and omissions.

Here is an example of a sequence of events that might have occurred in such a movement as this. Note that the aircraft allotted in this case permitted the movement of minimum essential equipment for combat *only*, including a total of 40 vehicles.

0915 — Receipt of initial alert.
0920 — Initial staff actions commence.
0945 — Staff meeting.
1015 — Staff presents final plan to CO for approval.
1030 — Troops prepared to move. Unit Commander's meeting.
1100 — Noon meal. Control officer departs for airfield.
1200 — 1st Bn crosses IP for movement to airfield (other units follow at 5-minute intervals).
1300 — 1st Bn reaches marshalling area at airfield. Aircraft ready for loading.
1430 — Stations time (1st serial, containing 1st and 2d Bns).
1500 — Take off.

A lot of work must be done by everyone in the regiment if a schedule like that is to be met; the only way it can be done is by eliminating all procedures that are not absolutely essential to planning and preparation.

The SOP recommended in this article is one solution to this problem of streamlining. It is presented in the hope that it will provide a basis for further development.

COLD-WET WEATHER TIPS FROM KOREA

By CAPT FRANK F. RATHBUN, Infantry

Anyone who has been in the Army long enough to complete his typhoid inoculation series must be aware that the Army has invested a great amount of time, talent and money on the study and development of winter clothing and equipment, use and care of weapons, and individual survival techniques.

Korean winter campaigns have proved the over-all soundness of present winter doctrine and equipment. The best advice from this theater on living and fighting in sub-zero weather is that men be fully trained along the present lines of thought, that they be made aware of the importance of this training to them, and that they be taught how to wear and care for the clothing and equipment they will be issued.

Men of the 25th Infantry Division who have spent at least one winter in Korea were asked recently to comment on their experiences and to offer any advice they had. By far, the majority of their comments repeated much that has already been published by appropriate agencies within the Army, and can be learned by reading the excellent articles and manuals on the subject. But much of what they had to say was new and pregnant with practical lessons learned the hard way — from living and fighting in the raw. Their tips add workable refinement to much that has already been published.

The worth of the selected comments which follow is very often the difference between reasonable comfort and plain, every-day misery or loss of life.

Here is what the old hands have to say:

TROOPS

If the tactical situation permits building fires on the reverse slope during daylight hours, be sure to heat some large rocks before sundown. When the blaze must be put out, place the heated rocks and embers from the fire in a hole 1' x 1' x 1' cut into the foxhole or dugout wall. This device will retain heat for five or six hours.

Warm "C" rations before eating and mix with water to keep warm and maintain digestive efficiency during cold season. This helps prevent sluggish bowel action.

Cover foxhole floors with pliant brush, straw, or other covering to keep sleeping bags off the ground at night and shoes dry during waking hours.

Wear combat boots while driving vehicles when the floorboard is warmed by engine heat. Change to shoe pacs in the colder evenings and night-time. This prevents sweating and subsequent freezing of the feet and also insures daily changing of footgear. Straw mats on floorboards help keep riders'

feet warm in rear seats and in truck beds.

Carry candy-bars or other compact sources of quick food energy to provide energy and caloric heat.

Apply brushless shaving cream to hands before immersion in gasoline or oil, and after washing during cold weather. This combats chapping and cracking.

Place extra socks inside the sleeping bag close to the body at night to keep them dry and warm.

Use safety pins from ammo bandoliers to pin socks by the heels to one of the inner garments in the hollow in front of the shoulders, one pair on each side. This allows the foot to fold down along the sock top. It provides extra insulation for the wearer and prevents sock loss.

Institute a pair-for-pair clean, dry sock replacement system.

Use the space around the loose blouse of trousers at boot tops to store extra socks. This method will keep socks dry, warm, and readily accessible when needed for a change Blousing must be done on the outside of the footgear, using rubber bands or the fasteners on field trousers to keep the trousers snug against the boot without reducing circulation.

WEAPONS

Test-fire all automatic weapons carried on patrols during freezing weather before the patrol leaves the MLR.

Manipulate the traversing and elevating mechanism on howitzers and smaller weapons through their entire arcs frequently to prevent moving parts from freezing.

Arrange wiring that will allow aiming stake lights to be turned on and off from the gun emplacement. This conserves battery power of aiming stake devices during cold weather, when battery life is shortest.

Cover lenses and moving parts of sights and optical instruments with the plastic bags that come in "C" rations. This covering combats freezing and clouding.

Place wooden blocks, or insulating material such as straw, under each leg of crew-served weapons in stationary positions. This keeps the legs from freezing to the ground.

Break up frozen ground before placing mortar base plates, or place thick layers of cushioning material underneath them to absorb shock. Initial recoil can make the base plate bounce out of place or even crack it.

Place mortars and other weapons subject to heavy recoil with particular care for accurate alignment during cold weather. Cold metal is easily damaged by strains of unequally distributed shock.

Clean mortars and other crew-served weapons in the open during cold weather. Change of temperature brought about by taking weapons inside warm shelters to clean them will cause moisture condensation. This results in freezing and rust when the weapon is taken back outside.

Build small wooden bases for aiming stakes during freezing weather to eliminate driving stakes into hard ground.

Remove all *excess* oil from both individual and crew-served weapons during cold weather to prevent

freezing and sluggish action of moving parts.*

EQUIPMENT

Empty water from water trailers into small cans that can be stored inside mess tents during freezing weather.

Place field burners in kitchen tents with the flame valves open to prevent freezing.

String communications wire overhead when ground surfaces are frozen. This eliminates danger of the wire being broken by vehicles or troops against the unyielding ground, and saves the digging needed to bury them.

Protect field phone sets as much as possible during cold weather to conserve batteries.

Dig an emplacement for field switchboards approximately three feet deep and with sufficient room for the switchboard operator and a stove. Facilities should be large enough to allow warming of wire crews.**

Improvise straps to keep gun-covers closed during movements in freezing weather. Zippers often freeze in cold, wet weather.

FOOD HANDLING

Construct a trough or pan to hold marmite can inserts, and dig a slit trench for a fire to heat the water in the can holding the marmite can. This prevents chilling of food containers used to feed troops not under shelter.

Keep a fire burning under the coffee container while serving troops outdoors. Provide a can of hot water to dip mess gear into before serving meals. Water will quickly warm the kits, reducing chilling of food.

Provide wind-breaks or cover for cooking and heating of mess water. Cooking in an exposed position is extremely slow, and food is often under-cooked.

VEHICLES

Place wooden blocks, straw, or other thick material under wheels or tracks of vehicles parked in soft, wet ground.

Start all vehicle engines at least once in every 12 hour period. Never race a cold engine; oil is sluggish and poorly distributed until the engine has warmed at idle.

Keep gas tanks full. Check and drain the fuel filter daily.

Pump foot brakes gently for at least a quarter mile after crossing streams or after an immersion in water. This prevents brakes freezing when the vehicle is parked.

Park vehicles with brakes released and all wheels securely

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*Note that this suggestion refers to *excess* oil. This is in agreement with FM 23-5, *U.S. Rifle, Caliber .30, M1*, October 1951, which, in speaking of care of the weapon in temperatures below 32°, says, "The rifle should be disassembled and completely cleaned * * *. The working surfaces which show signs of wear may be lubricated by rubbing with a cloth which has been wetted in special preservative lubricating oil."

Army Field Forces Board #3 informs the QUARTERLY that most cold-weather malfunctions are the result of cosmolene overlooked in cleaning. A new method of packing rifles is under development but cosmolene will be with us for some time yet.

**The Infantry School concedes that digging-in the switchboard and the wireman's comfort should be considered. However, The School feels that having the switchboard operator and the wire crews doubling-up in the same emplacement is unsatisfactory. Experience shows that for efficient operation the switchboard should be located where traffic and the noise level are at a minimum. An installation of the type suggested by the author would be full of distractions for the operator and conducive to damage to wire lines, grounds, etc.

blocked to prevent movement of vehicle. Parking vehicles with brakes set is apt to result in binding brakes during freezing weather.

The American soldier is, by nature, a lover of comfort. His adaptiveness, his ingenuity, and his skill in the building arts pick up where cold weather training leaves off and carry him and his unit to far greater combat effectiveness — and comfort. Encourage his ingenuity, directing it to the end of keeping him a fit fighting man.

"An Infantry company commander, for instance, is responsible for some 200 men and tens of thousands of dollars worth of weapons, equipment and supplies. He is responsible for the feeding, clothing and shelter of his men; for the maintenance and proper use of their weapons, vehicles and equipment. He must see that hundreds of individual items of supply are always on hand in adequate quantity. In short, he must manage the military community which is his command, as well as lead it in combat. His time or his life should never be his own; they belong to his men. He has accepted the greatest of all responsibilities — the responsibility for human lives."

Secretary of the Army Frank Pace, Jr.

THE MOCK 57

By CAPT WILLIS L. BUCKNER, Infantry

EDITOR'S NOTE: *To fill the need for easy-to-make, realistic training aids for the 57 and 75mm recoilless rifles, the* INFANTRY SCHOOL QUARTERLY *presents two articles which will be of direct value to units in training crews for these hard-hitting weapons.*

In addition to "The Mock 57" which follows, be sure to read "Subcaliber Recoilless Rifles" beginning on page 55.

Figure 1. Mock 57-mm Recoilless Rifle. The tube and chamber are pieces of iron piping approximating dimensions and weight of the 57-mm Rifle M18.

Training troops on recoilless rifles is difficult enough when ample quantities of weapons are available. But to attempt to train entire companies, battalions, and regiments on the T/O&E allotment is nearly impossible. The task becomes even more trying when 57's and 75's are in short supply. As S3 of the 13th Infantry Regiment, 8th Division, I experienced these trials. At the beginning of our training program

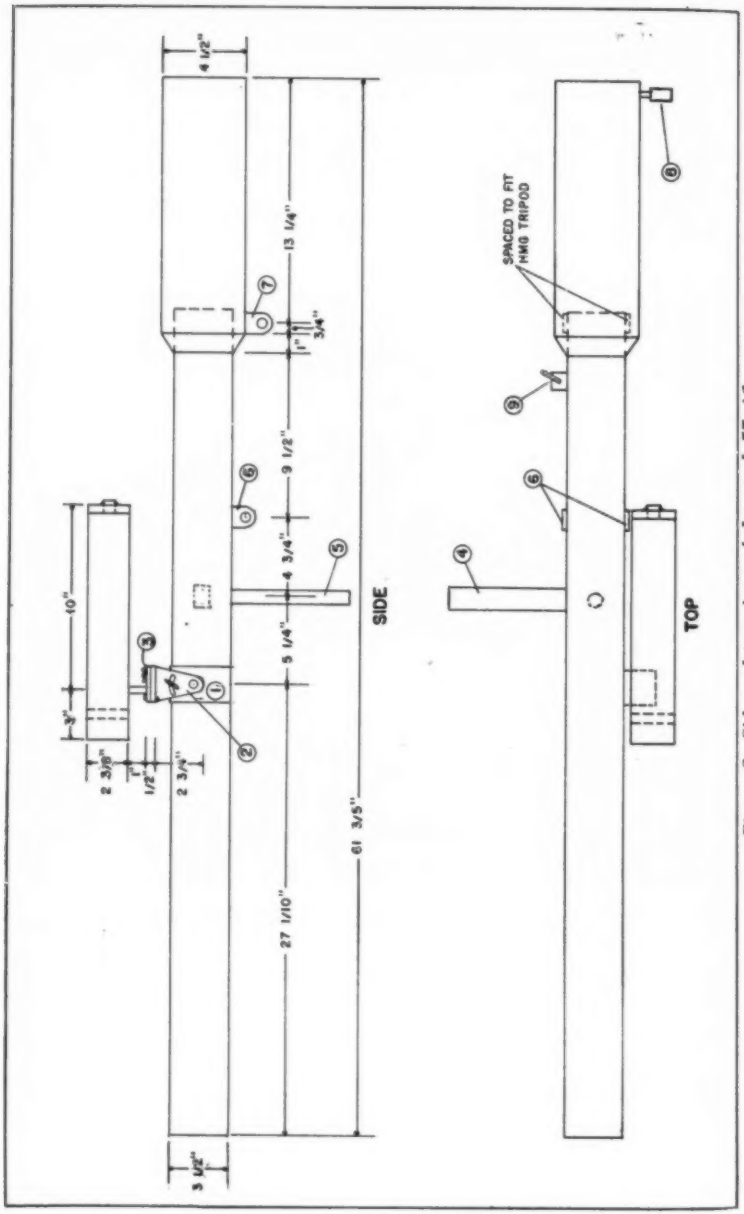


Figure 2. Side and top views of the mock 57-rifle.

there were only eight 57's for our entire division.

Despite our efforts at pooling, bartering, and changing schedules, there were never enough rifles to give one company more than two or three weapons at a time. To appreciate the problem you would have to see 250 trainees and 15 to 20 cadremen huddled around two 57's.

Each mock 57-mm rifle costs around $20.00. The cost, of course, decreases in proportion to the numbers produced. A possible refinement, not yet developed, is a modification to permit sub-caliber firing.

As shown in Figure 1, the tube and breech are merely pieces of pipe having about the same dimensions and weight as the tube and chamber of the 57-mm Rifle M18.

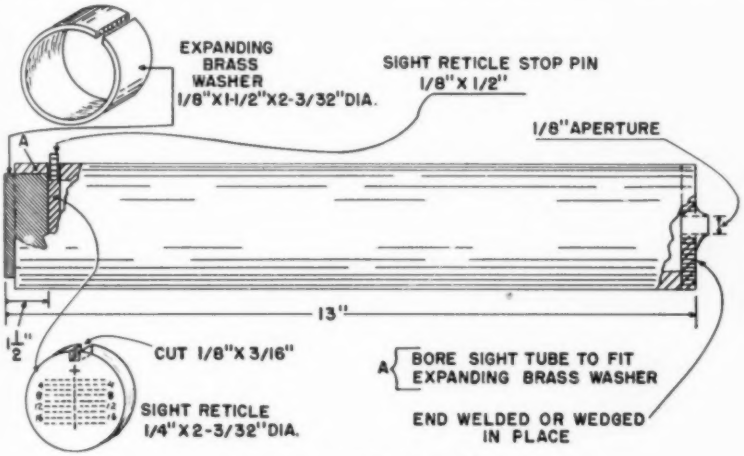


Figure 3. Sight Assembly.

We found the solution was to construct mock rifles. In a month our training aids shop, using plans drawn up by our S3 section, constructed 100 mock 57's.

Although the device cannot be fired, it works well in teaching sighting and aiming, for both range and leads, tracking, bore sighting, crew drill, tactical exercises, concealment and camouflage, and hasty fortifications.

These pieces are welded together and form the base on which all other parts are attached. Figures 2, 3, and 4 are drawings showing the approximate dimensions and various views of the mock 57 and sight assembly.

The weight of the piece, incidentally, is very important. It should be as close to the original as possible. Using lighter weight material gives an entirely false im-

Figure 2. Side and top views of the mock 57-rifle.

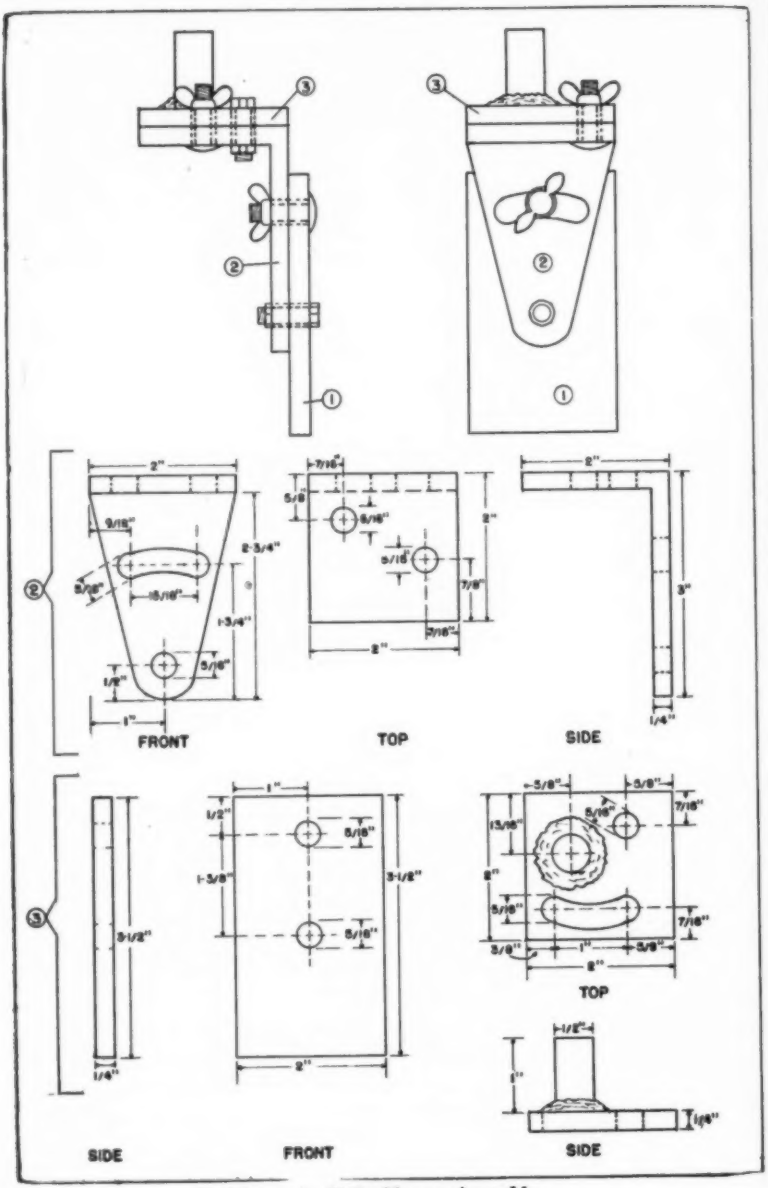


Figure 4. Sight Mount Assembly.

pression of the physical performance necessary in crew drill and on marches. Also the bore of the entire piece should be unobstructed to allow for practice in boresighting.

The sight is constructed from a 13" piece of 2" piping with a small eye aperture at one end, and a non-magnifying disc of plexiglass in the other. This plexiglass disc, which represents the objective lens of the telescope, may be etched, painted, or silk-screen processed to simulate the sight reticle. The reticle can be mounted in the sight tube in several ways. Figure 3 shows a very satisfactory method of holding the reticle in place.

The sight tube is held in place by three pieces of metal shown in Figure 4. No. 1 is welded to the tube as shown in Figure 2. No. 2 is fastened to No. 1 with a fixed bolt, which represents the elevation eccentric screw, and a wing bolt. Adjustments in elevation of the sight are made with this wing bolt. No. 3 is fastened to No. 2 in the same manner — one fixed bolt, which represents the azimuth eccentric screw, and one wing bolt. Lateral adjustments are made using this wing bolt. The sight tube is welded to the vertical rod attached to No. 3.

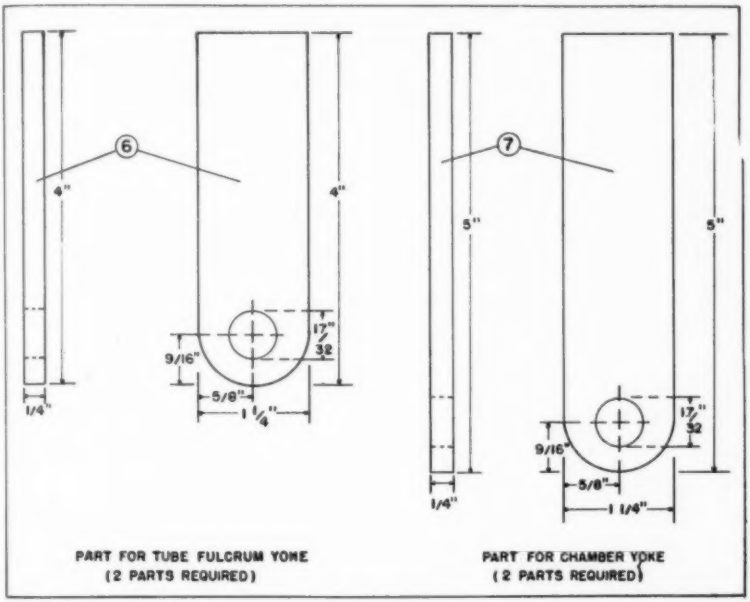


Figure 5. Dimensional drawing of parts for tube and chamber fulcrum yokes.

Figure 6. Placing the mock 57 on a machine gun tripod.

Before leaving the sight it is well to explain it a bit further. The great distance between the axis of the bore and the axis of the sight, as well as the wide elevating and traversing arcs, is intentional. It enables instructors to graphically portray to the student that the axes of the bore and sight must coincide. However, the height of the sight is somewhat of a handicap in crew drill and it is believed that on subsequent models the sight should be lowered about 1½".

Some difficulty has been encountered with the sight reticle. Rainy weather tends to cause moisture condensation on the inside of the sight. To counteract this we bored several small holes in the bottom of the telescope and then pumped air into the eye aperture. Another solution is to have an eas-

Figure 7. Preparation for boresighting. Note string "crosshairs" on muzzle, and breech disk, with eye aperture in hands of the man on left.

ily removable objective lens which can be wiped dry frequently.

The trigger handle and the extendable handle assembly are shown as Nos. 4 and 5 in Figure 2. The trigger handle should be constructed with flat surfaces and be as nearly the size of the actual trigger handle as possible. The extendable handle is merely a short length of pipe welded to the bottom of the tube.

The mock 57 was originally designed for use on the M1917A1 tripod. If notches are filed or milled in the chamber fulcrum the training aid may also be used with the light machine gun bipod. We have conducted exercises in positions, tracking, aiming, and leading without the bipod or tripod.

The tube fulcrum yoke for the machine gun cradle pintle and the chamber fulcrum yoke must be positioned accurately in order to fit on the tripod. These parts are shown as Nos. 6 and 7 in Figure 2. Their dimensions are shown in Figure 5. Figure 6 shows the mock 57 being placed on the machine gun tripod.

Four notches, 90° apart, should be filed in the muzzle for use in boresighting. A metal, wooden, or cardboard disk, with an eye aperture, is inserted into the breech for

Figure 8. Large numbers of men can be trained at relatively small cost with the mock 57.

this process. Preparation for boresighting is illustrated in Figure 7.

Other refinements may be added such as a breech block handle (shown as No. 8 in Figure 2) and a safety lever (No. 9 in Figure 2).

The proof of any pudding is in the eating. And the proof of the success of this training aid lies in the fact that our division is now using the Mock 57-mm Rifle with excellent results. Of course it doesn't take the place of the actual weapon, and it can't be used for firing live rounds, but it is certainly helping to fill a big gap in our training. (See Figure 8.)

INSTRUCTIONAL MATERIAL

As a service to its readers, the *Quarterly* regularly lists new instructional problems available through the Book Department, The Infantry School. All these problems contain lesson plans and narratives for the instructor. Additional items will be found on pages 19 and 112.

Problem #1122. **Marksmanship, Preparatory Training, M1 Rifle.**

Four hours on kneeling, standing, squatting, and hip firing positions, Price, 6¢.

Problem #1123. **Marksmanship, Preparatory Training, M1 Rifle.**

Four hours on trigger squeeze in all positions; taking positions rapidly. Price, 6¢.

Problem #1125. **Marksmanship, Preparatory Training, M1 Rifle.**

Eight hours on sustained fire; use of score card; examination prior to range firing. Price, 6¢.

Problem #1129. **Marksmanship, Record Practice, M1 Rifle.**

Record practice, Tables IV and V, Tng. Cir. #5, DA, 4 April 1950. Price 6¢.

Problem #1130. **Marksmanship, 1000", M1 Rifle.**

Four hours of range practice, safety precautions, 1000" instruction practice. Price, 4¢.

Problem #1134. **Marksmanship, Preparatory Training, BAR.**

Four hours on sighting and aiming; positions, trigger manipulation, automatic fire exercises, care and cleaning. Price, 6¢.

Problem #1135. **Marksmanship, 1000", BAR.**

Three hours on range procedure, safety precautions, 1000" instruction practice, BAR. Price, 6¢.

Problem #1142. **Marksmanship, Record Practice.**

Four hours on record practice, Course A, Carbine M2. Price, 6¢.

The above items may be ordered from
The Book Department, The Infantry School, Fort Benning, Georgia

SUB-CALIBER RECOILLESS RIFLES

By MR. RAY S. MILLER

EDITOR'S NOTE: *The 57-mm and 75-mm firing devices described in this article were developed for use at The Infantry School by Mr. Ray Miller, who is Armament Shop Superintendent in Fort Benning's Post Ordnance Shop.*

Figure 1. 57-mm recoilless rifle sub-caliber firing device assembled.

In an effort to cut expenses, certain phases of weapons training are always vulnerable. This is particularly true of the costly live firing of heavier weapons.

Still, there has to be some quick, thorough means of training our soldiers to fire these weapons. The finger of progress then points at our technical know-how to find an inexpensive substitute which will simulate actual firing.

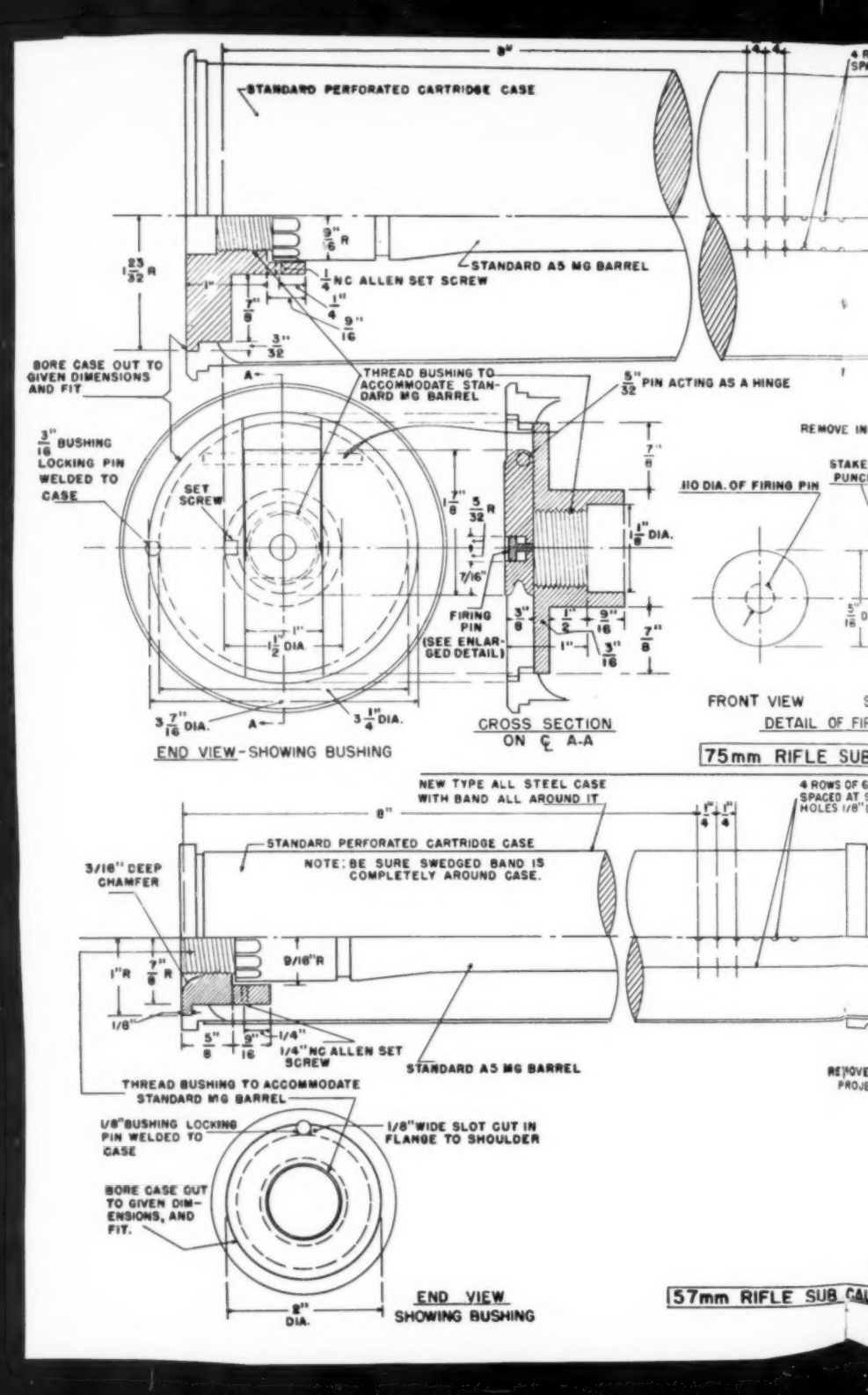
This necessity has recently mothered the invention, at The Infantry School, of sub-caliber devices for the 57-mm and 75-mm recoilless rifles.

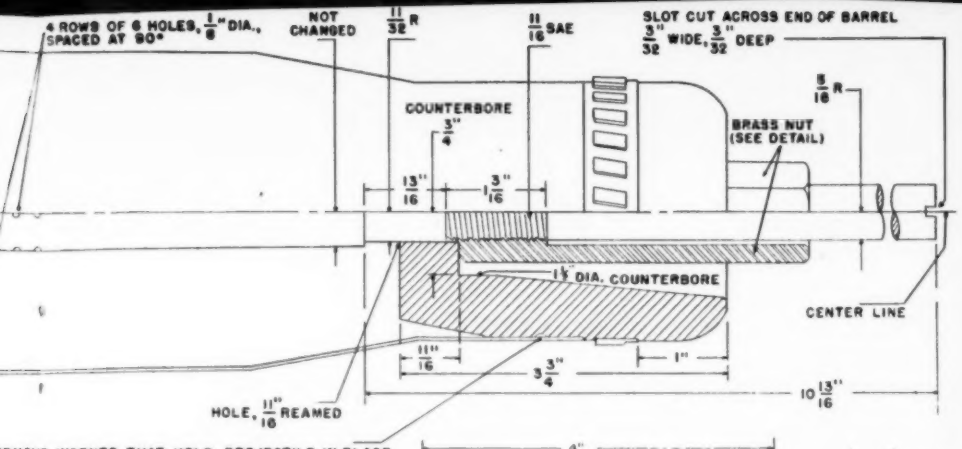
Previous models of similar training devices had been poor training substitutes because they achieved little realistic effect. These new designs not only fill this requirement but have all other essential characteristics of a successful training aid. With them —

1. The weapon is fired with a miniature but realistic backblast.
2. Expense is reduced to permit training in large numbers.
3. The devices are safe for use.
4. And they can be made by post ordnance shops.

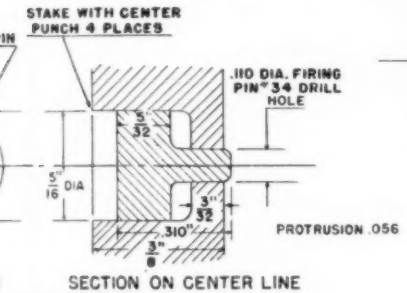
SUB-CALIBER DEVICES

Dissatisfied with the sub-caliber devices then available for the recoilless rifles, The Infantry School, in 1950 asked me to design new ones that would produce back-blasts simulating those in normal firing. Without the back-blast, students developed bad safety habits. As a further requirement, The School desired the muzzle velocity to be in the neighborhood of that of the normal round. Previous sub-caliber models had produced velocities of Infantry machine gun rounds — more than double those of the recoilless weapons.


8"
STANDARD PERFORATED CARTRIDGE CASE
STANDARD A5 MG BARREL
1/4 NC ALLEN SET SCREW
BORE CASE OUT TO GIVEN DIMENSIONS AND FIT
THREAD BUSHING TO ACCOMMODATE STANDARD MG BARREL
5/32" PIN ACTING AS A HINGE
3/16" BUSHING LOCKING PIN WELDED TO CASE
SET SCREW
FIRING PIN (SEE ENLARGED DETAIL)
1 1/8" DIA.
3 7/16" DIA.
3 1/4" DIA.
END VIEW - SHOWING BUSHING
CROSS SECTION ON ℄ A-A
FRONT VIEW
DETAIL OF FIR
75mm RIFLE SUB
NEW TYPE ALL STEEL CASE WITH BAND ALL AROUND IT
STANDARD PERFORATED CARTRIDGE CASE
NOTE: BE SURE SWEDGED BAND IS COMPLETELY AROUND CASE.
3/16" DEEP CHAMFER
1/4" NC ALLEN SET SCREW
STANDARD A5 MG BARREL
THREAD BUSHING TO ACCOMMODATE STANDARD MG BARREL
1/8" BUSHING LOCKING PIN WELDED TO CASE
1/8" WIDE SLOT CUT IN FLANGE TO SHOULDER
BORE CASE OUT TO GIVEN DIMENSIONS, AND FIT.
END VIEW SHOWING BUSHING
57mm RIFLE SUB CAL

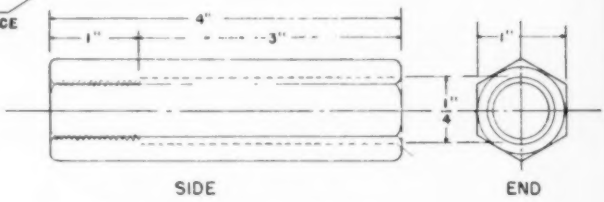


REMOVE INDENTS THAT HOLD PROJECTILE IN PLACE



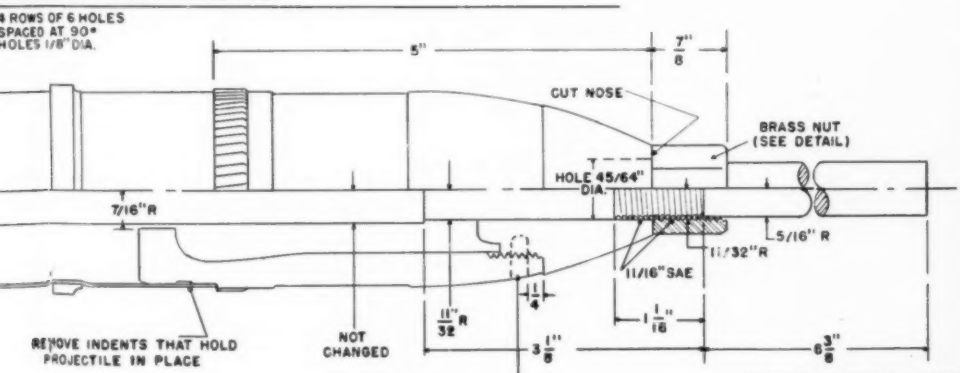
SECTION ON CENTER LINE

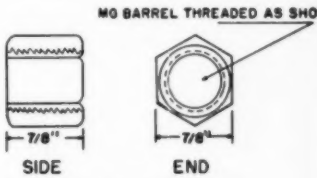
IL OF FIRING PIN



HEXAGONAL BRASS NUT

LE SUB CALIBER DEVICE





HEXAGONAL BRASS NUT

SUB CALIBER DEVICE

57-MM SUB-CALIBER DEVICE

The resulting 57-mm recoilless rifle device is simple but very effective. (See Figure 1.) It is made from:

Figure 2. Component parts, 57-mm sub-caliber firing device.

1. A salvaged shell case and projectile.
2. A Model 1917A1 machine gun barrel.
3. A small piece of steel suitable for a bushing.
4. A small piece of aluminum for a dummy fuze.

The end of the shell case is bored out to seat a bushing. The projectile is drilled in the center for passage of the machine gun barrel. The center of the bushing is threaded for attaching the machine gun barrel.

In the barrel (see Figures 2 and 3), rows of six ⅛-inch holes each are drilled 90-degrees apart around the barrel. Each row of holes starts 8 inches from the rear of the barrel. These holes reduce muzzle velocity to standard shell velocity and permit gas to escape giving the required back-blast.

The tip of the assembly is a hexagonal brass nut. (See figure, pages 56-57.)

To assemble,

1. Attach the case and projectile.
2. Screw the machine gun barrel into the bushing, adjust the head space, and tighten the Allen set screw.
3. Insert the muzzle of the barrel through the case and projectile and seat the bushing into the base of the case.
4. Lock the assembled group by screwing on the hexagonal brass nut.

Set head space by adjusting the barrel so that the base of a cartridge in the chamber is flush with the rear end of the 57-mm case. If further adjustment is required, use the trial and error method.

75-MM SUB-CALIBER DEVICE

In making the 75-mm device, follow much the same procedure. The major change is a slot cut crosswise in the face of the bushing 1-inch wide and ⅜-inch deep to accommodate a small door. (See Figures 3 and 4.) The door holds a short firing pin. The locking nut (hexagonal brass nut) is 4 inches long and when assembled is almost hidden inside the projectile.

Assembly and head space are the same as for the 57-mm device.

To fire either device, load a caliber .30 M2 cartridge in the machine gun barrel chamber and fire the weapon as when using standard ammunition.

The caliber .30 cartridge gives a

Figure 3. 75-mm recoilless rifle sub-caliber firing device assembled. Note door, holding firing pin, in the base of the round. This door opens to permit loading .30 caliber M2 cartridge.

miniature back-blast, enabling the firer to sense the effect of firing the standard ammunition. Once he observes the back-blast, his awareness of the necessity for all safety precautions is assured.

The only maintenance requirement is cleaning after use each day.

By using salvaged materials, these devices can be made for about $12.00. Compared with the cost of ammunition, $27.00 for 75-mm HE and $11.23 for 57-mm HE, the tremendous saving is apparent. You can train large numbers of troops effectively at a reasonable cost. The actual cost per round is reduced to less than 10 cents, 9½ cents of it for the cartridge.

Figure 4. 75-mm sub-caliber firing device with firing pin door open.

Detailed plans for both devices are shown on pages 56 and 57. They can be made in any Post Ordnance Shop or Medium Ordnance Maintenance unit.

AN OBLIGATION, SOLDIER!

By CAPT RALPH T. TIERNO, JR., Infantry

With minor adaptations this article will serve as a narrative to be used by an instructor teaching intelligence procedures to an enlisted class.

Intelligence procedures — what do they mean to the individual soldier? Few troops on duty today will give the correct answer: "The collecting and timely reporting of information which the individual soldier is obligated to perform to help his commander and himself."

Have you, as an individual soldier, ever considered that collecting and reporting information is an obligation that everyone of us should perform? A commander, making tactical decisions and issuing orders, needs the intelligence derived from such information about as much as a rifleman needs his M1.

You can't overestimate the importance of the individual soldier in gathering information. How can the intelligence officer cover the entire battlefront except through the assistance of the men who are up there fighting the enemy? By collecting and reporting information, the soldier helps himself, his unit leader, and his commander. He contributes to the vital flow of raw information needed to produce combat intelligence.

A recent Army Field Force letter pointed out one of our glaring weaknesses in Korea when it said, "Officer and enlisted personnel are not adequately indoctrinated as to their responsibility in observing, collecting, and reporting military information that may be of intelligence value."

Most of us know that the intelligence officer (in battalions and regiments the S2) produces combat intelligence. He goes through several steps in the process. It is interesting to know all of them, but it isn't imperative. We should know about the first step — *gathering information* — because that's the one *we* can do something about.

The S2 uses every information collecting agency available to him to learn about the enemy, the terrain, and the weather.

A battalion S2 uses these information collecting agencies:

Rifle companies
Heavy weapons company
Intelligence section
Headquarters company
Attached units
Higher headquarters
Adjacent headquarters

The basic collector of information for any one of these agencies is *you*, the individual soldier. Who knows more about the enemy than you do? Who meets him on closer terms? You do the patrolling, man the listening posts, and keep an eye on the enemy from OP's. With about two hundred men in a rifle

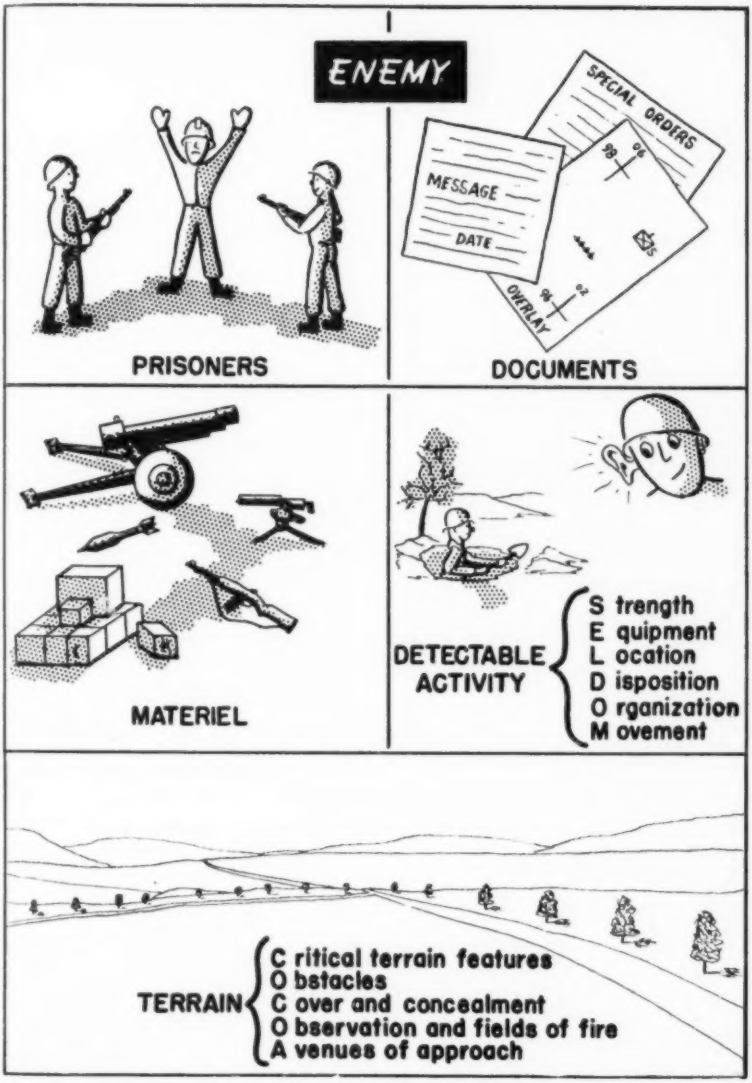


Figure 1. The individual soldier collects information by capturing prisoners, documents, and materiel; but the use of his senses in detecting everything possible about the enemy; and by observing all the details of the terrain in his area.

company, some of whom are always on one or another of these jobs, why have our intelligence officers had trouble producing intelligence in Korea? It's mainly because individual soldiers don't know how necessary it is for them to collect and report information. When individuals are ineffective the whole information collecting effort breaks down.

How does the individual soldier collect information? By capturing prisoners, enemy documents and materiel, and by observing and reporting what he *sees, hears,* and *smells.* If you pick up any item of information about the enemy through your senses — your eyes, your ears, your nose — you are practicing the observation of *detectable enemy activity.* (See Figure 1.) But your part of the job doesn't end until you've reported your information.

You don't have to figure out what all your information means. That's the S2's job. Intelligence officers question and observe prisoners, inspect captured materiel, and read captured documents. They turn their results into the intelligence that directly affects you, your squad, your platoon, company, and so on up the chain of command.

You give those intelligence officers a better chance to do a good job if you handle prisoners of war and documents the right way. These two sources produced as much as 50% of all the information gathered during World War II and in some places in Korea the figure runs as high as 100%. The way you handle them when they are in your hands hurts or helps the S2's chances of getting something of value out of your prisoners and captured letters, maps, overlays, diaries, and other documents.

The five "S" system will help you remember how to handle prisoners. (See Figure 2.)

Remember the five-S system:

S-earch for weapons and documents.

S-egregate into the following groups: officers, noncoms, privates, civilians, and deserters.

S-ilence the prisoners and maintain the high emotional state that exists at the time of capture. Give the prisoners nothing in the way of food, water, or tobacco until after interrogation.

S-peed them back to the collecting points. (If any one of the S's is most important, speed in evacuation certainly is it!)

S-afeguard prisoners, for you may lose valuable information by putting prisoners in the hands of trigger-happy guards, or by allowing the prisoners to escape.

Documents taken from a prisoner are returned to the rear in the hands of the guard who escorts the prisoner. They are tagged with date, time, and circumstances surrounding capture. Documents found in old enemy positions, CP's, etc., are tagged in the same manner.

All documents are sent as rapidly as possible through command channels into intelligence channels. The S2 processes captured documents in much the same manner that he processes prisoners. First, they are separated according to where they are captured. Next, they are classified as to their informational content.

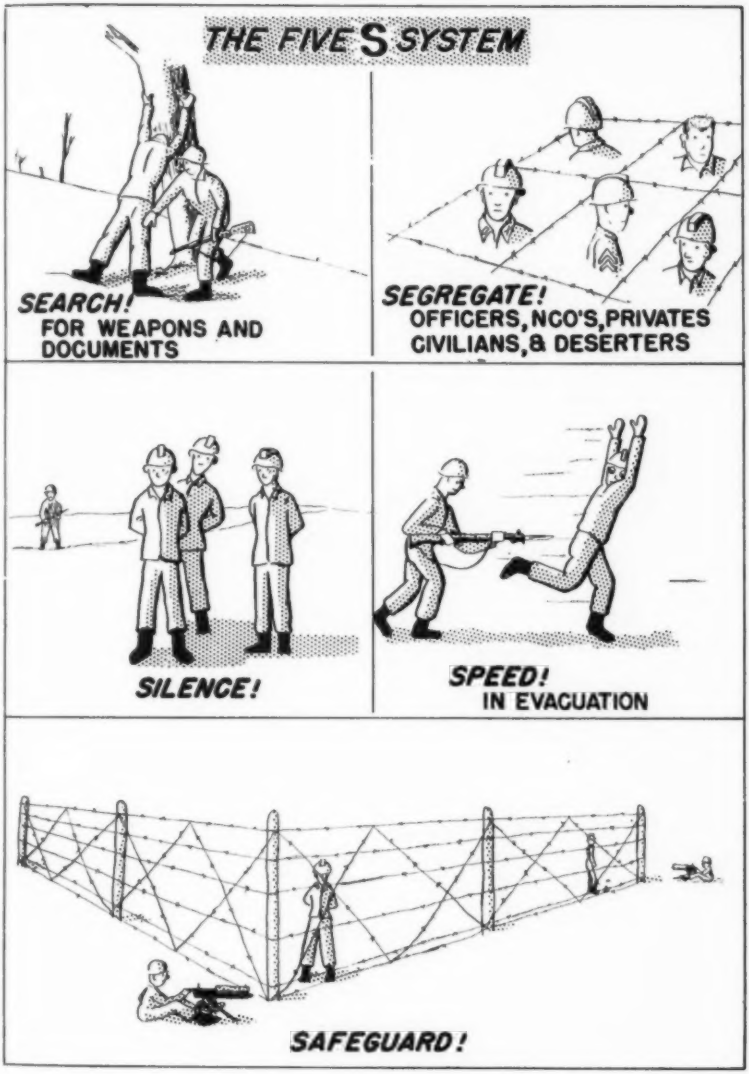


Figure 2. Prisoners are more valuable to intelligence officers if you practice the principles shown here.

No matter how unimportant a document looks, it should be turned in. Intelligence specialists will determine quickly the importance of the document.

Always remember, *if it is important enough for the enemy to write it down, it is important enough for you to pick it up and turn it in.* From enemy documents your intelligence officers get information on enemy strength, equipment, location, disposition, organization and movement. Time and time again, through proper handling and processing of prisoners and documents, the enemy has been defeated with staggering losses and with relatively light losses to us. That document you send back may save your own life!

Our intelligence people study enemy materiel for various reasons. Technical men may study the equipment and then pass along intelligence on how to use a particular piece of equipment. This may help you to put it in action to your own advantage if it is captured in large quantities. What we find out from enemy materiel may aid in developing counterweapons and tactics. Further, by studying the enemy's equipment, we find out how the enemy's resources are holding out. With this knowledge, our Air Force can concentrate on destroying enemy materials in short supply and those he needs vitally.

Now let's consider information of direct concern to you, your squad, your platoon, company, and battalion — detectable enemy activity and the terrain.

Although specialized missions are usually carried out by the intelligence personnel of the battalion or the I&R platoon of regiment, the bulk of information that comes to the intelligence officer will be from observation by individuals in the front lines. So think about it! What do you look for when you see the enemy? A key word will help you remember — SELDOM.

S-trength
E-quipment
L-ocation
D-isposition
O-rganization
M-ovement

"Sir, I saw nine men armed with rifles and one automatic rifle on the east slope of Hill 301 dug-in in a perimeter defense."

Here is information the intelligence officer can use. What more can a squad or platoon leader ask for in the way of information about the objective he is about to take? (See Figure 1.)

What about the terrain? Again you can give the intelligence officers much needed information by looking for the solution of this key word — COCOA.

C-ritical terrain features.
O-bstacles
C-over and concealment
O-bservation and fields of fire
A-venues of approach

"The enemy is looking right down our throats from Hill 409. If we take it we'll put him in the same kind of a pickle. You can see everywhere from it and you can fire in any direction. We can get from our position to its base by following that dried-up creek bed. There's nothing there to stop our tanks or Infantry. We'll reach the assault position without being seen, and nothing can hit us except mortars."

How have we provided the information in COCOA? Let's check back.

C-ritical terrain — Hill 409. The enemy finds it most valuable and it would be just as useful to us.

O-bstacles — "There's nothing to stop our tanks or Infantry."

C-over and Concealment — "We'll reach the assault position without being seen and nothing can hit us except mortars."

O-bservation and fields of fire — "You can see everywhere from it and you can fire in every direction."

A-venues of approach — "We can follow that dried-up creek bed."

Weather is another element your commander must know about. Weather affects the terrain. Rain turns roads into bogs and fills rivers and streams that might ordinarily be fordable. Falling rain and snow, as well as fog, haze, or cloudiness, limit visibility. Temperature affects personnel and equipment. Moonlight may help or hinder you or the enemy in a night attack. Wind changes may affect the use of smoke by us or the enemy. Any information on weather conditions may be useful. Report it, soldier!

"Sir, the wind has changed and is blowing away from us toward the enemy." Or, "The rain has fallen just like a cloudburst in Texas and the river has come up three feet. We can't cross it now."

After you front line individual soldiers have gathered your information, report it immediately! It may be helpful to use a form for recording and then reporting this information. You may have had some instruction in sketching*, writing messages, putting information on maps, making overlays, and possibly in using the observer's report form. You can use any of these ways to record and report information.

Information can be sent by verbal report, by telephone, or radio, or by written report, using a runner to deliver the sketch, overlay, or message. The keynote of recording and reporting is — BE ACCURATE.

Finally, we have the reporting of negative information. A soldier may report negative information:

(1) When he is alert and observing.

(2) When he doesn't observe and just reports to be reporting.

Of course, the intelligence officer is only interested in the first. Negative information can mean a great deal. It may indicate that the enemy has broken contact and is withdrawing, or that he is up to some other activity in a nearby area. A good rule to follow is — no matter how unimportant it may seem report all information, positive or negative.

The fact that "we haven't seen hide nor hair of the enemy all day," or "not a round has fallen in the last hour" may be highly important to an S2 who is trying to keep track of what the enemy is up to.

The procedure for gathering and reporting information is not difficult to learn and follow. Remember the five "S" system in process-

*See "Panoramic Sketching" in the October 1951 issue of the QUARTERLY, page 88.

ing prisoners; turn in all documents and any unusual or new type of captured enemy materiel; report all information even if it seems unimportant.

It is a proved fact that the reported observations of one soldier may affect the success of an entire Army. Can you doubt then that intelligence is an obligation!

◆

"Well, I guess it's over for us now. I'm coming home along with the rest of your sons, husbands, and sweethearts. We're all tired. Six months is a long time, and many of us have seen as much as 10 months on the line. So we're coming back to rest until the next time.

"Behind us we're leaving the green, fresh kids just over from the States — our replacements. But they'll learn, just as we did — the hard way — and they'll learn fast. Some will be wounded, some will die, a few must, and all will be afraid.

"In a few weeks you will see where our ship docked in San Francisco with a few thousand troops on rotation, but remember that for every man on that ship somewhere in Korea his replacement's hell is just beginning."

Sgt. Wallace Glidewell **in the Detroit Free Press**

REGIMENTAL S2–KOREA

By MAJ JAMES M. PRATT, Infantry

Figure 1. Interrogation of Korean prisoners of war.

The way things are these days, it's just possible that you may find yourself answering the phone some night to hear:

"I got news for you — starting as soon as you can get here, you're the new Regimental S2."

Consider what that announcement would mean to you in Korea.

A new man in a new job. A frightening prospect? Not necessarily. The problem — the real job at hand — is thus clarified: as a brand-new Regimental S2, how do you go about maintaining the intelligence picture to your front? Just how do you operate? What are some of your best sources of information?

Usually the PW's initially captured, will be your quickest and best source of information in this new sector. (See Figure 1.) Your commander will want to know what's out in front of him, and the PW, when properly interrogated at battalion and regimental level, may not know all, but usually will tell all he knows. He will normally accurately identify his unit, give its strength, describe its weapons, and say how long it has been in the line. With patience on the part of your IPW* team, and the help of a map, he may be able to pin-point one or two automatic weapons or mortars. His knowledge of reserve units and future plans probably will be extremely limited. His information concerning the location of command posts may not be too accurate, due to his inability to read our maps, plus the fact that further interrogation may reveal his information to be several days old.

Patience cannot be stressed too much. It is a common failing to want to find out all the PW knows in a matter of minutes. With the CCF** and North Korean PW this just is not possible. When working through an interpreter, as you will, the answer to a simple question sometimes requires a long explanation complete with gestures on the part of the PW. Offering a cigarette or candy bar at the proper time will help a lot if the PW is cooperative. Threats or rough treatment ruin what might otherwise be a profitable interrogation, due to the stoic nature of the Oriental.

*Interrogation Prisoner of War.

**Chinese Communist Forces.

You will be disappointed if you expect a wealth of information from the contents of the pockets of the average PW. They will usually consist of a toothbrush, small broken mirror, a partially-filled sock of moldy rice or sorghum, a few coins or North Korean won, dried tobacco wrapped in any paper available, an Oriental version of a pulp magazine, and a few loose rounds of small arms ammunition. Seldom does a PW have a complete uniform when captured. As an item becomes worn out he is inclined to put on any piece of clothing locally available. Insignia and piping are either lost, worn off, or sometimes removed before capture.

Let's assume as a new S2 in Korea your regiment is ordered to take over the responsibility for a sector where little is known of the enemy. Let's further state that you have been fortunate enough in getting a PW soon after relieving the unit that previously held this portion of the line. After interrogation you are given certain information by the IPW team attached to your regiment concerning the location and identification of his unit and a few other plots of adjacent enemy units. Now you have the basis for building the framework of the intelligence situation in this new sector. So you plot what is pertinent on the situation map and as additional intelligence starts flowing in it will either confirm, refute, or add to these red symbols you have placed on the map.

As the day progresses you will be occupied by the many problems connected with your job in Korea. High on the list will be patrol plans that you must start making immediately, and suitable tar-

gets that you will want to recommend for tonight's harassing and interdictory fires. Sometime during the day it will be a good idea to get over to the adjacent units and see what intelligence information they have picked up, and also visit the Division G2 to see what he has of interest in your new sector. Also (and this is a "must") you will call "spot reports" of patrols and enemy contacts in to Division G2. At the close of the 24-hour period, "Paragraph One" of the unit report will have to be written. Don't put this down as routine paper work because the unit report will help you put out the latest word on the enemy activities and capabilities to all concerned. It goes without saying that much of the intelligence produced at higher levels is dependent upon your report, so give it some thought and make your "Paragraph One" as complete as possible.

One of your most important responsibilities as an S2 will be patrolling. It is vital to get the decision of the regimental commander as far in advance as possible on what patrols he will want for the following day. You should be prepared to recommend, based on intelligence available, the patrol activity the regiment should run. Have the draftsman ready to go so that overlays of the patrol can be sent out as rapidly as possible to the units who will be running the patrols, as well as to the higher and adjacent headquarters. Include the Army Aviation Section in this distribution; if the L-19 pilots know the routes of your patrols, and radio frequencies and call signs, they can be of assistance to you by relaying information on the progress of the patrols, and in the event that the patrol is out of radio range the L-19 can relay messages from the patrol to you.

Incidentally, you may want to use a small map board with acetate to plan your patrolling. By writing the approved order on the unused portion of the acetate you can hand this map board to the waiting draftsman and save several minutes in getting out the overlays. This same map board can later be used to plot the progress of the patrols and enemy activity observed or encountered. It is not always practical to attempt to put this information on the S2-S3 situation map while your patrols are still out. Try to give the units who will be running the patrols a little advance information in the form of a warning order over the telephone on what they will be required to do.

A word on patrol tasks (no longer called missions): don't make your orders too complicated or too numerous. Keep them simple and there won't be any chance of misunderstanding by the patrol leader. If you are given the mission by higher headquarters to patrol the same area to your front almost daily, remember to vary the routes out and back as well as the times of departure. Failure to do this has often meant unnecessary risk to the patrol. Also remember that in Korea your patrols will be under enemy observation far more than you think. A lack of enemy sighting or contact can give the patrol leader a very false sense of security in this terrain. Another problem will be the distance your foot patrols can cover to your front on reconnaissance. One method of increasing the range of foot patrols

is to mount them on ¼-ton vehicles and move out to a dismount point, proceeding from this point on foot and picking up the vehicles at a pre-arranged point on return. This use of vehicles is predicated on two things: (1) The terrain is open enough to prevent ambush while the patrol is mounted. (2) The terrain has been thoroughly swept on preceding days by foot patrols.

An example where this worked successfully was at the base of the "Iron Triangle" where the 15th Infantry Regiment, 3d Division, was defending a line just east of

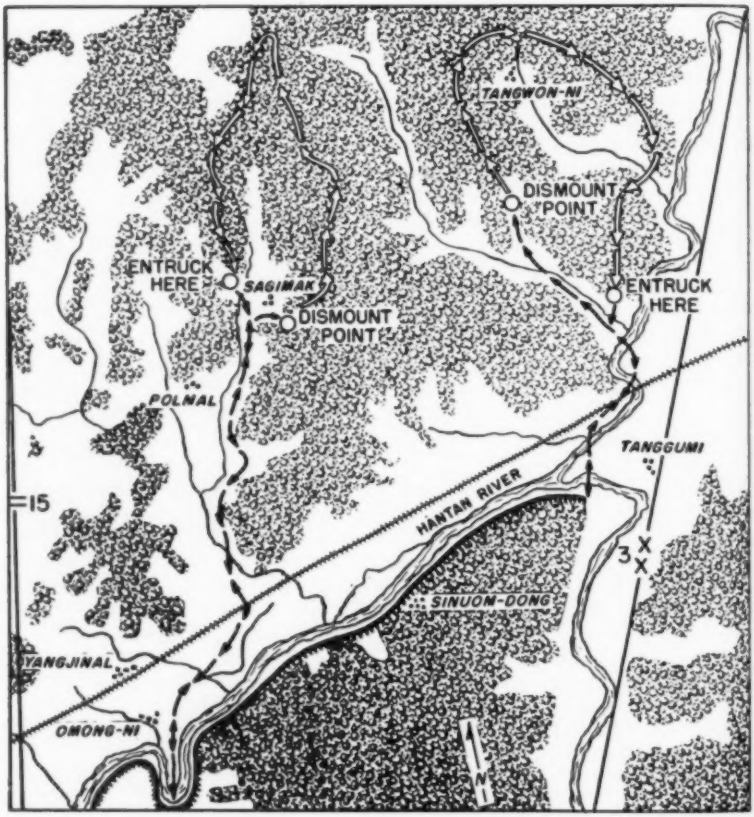


Figure 2. In the "Iron Triangle" area patrols made much longer sweeps by riding part of the way. Entrucking and dismount points were separated to prevent ambush and increase the security of vehicles and drivers.

Chorwon (See Figure 2). In June 1951 the enemy appeared to have withdrawn north of Pyonggang (the apex of the triangle), defending the high ground west and east of the triangle. The 15th Infantry had been patrolling without contact daily to a depth of 6000 meters. Patrols of reinforced platoon size were then sent by jeep to a dismount point concealed from possible enemy observation. From there they proceeded on their mission, thus giving the regiment a daily sweep of approximately 10,000 meters in some cases.

The SCR-300 proved to be one of the most valuable pieces of equipment carried by a patrol; never send a daylight patrol without it or a similar type radio. Sometimes it may be necessary to establish a relay station with local security at some intermediate point to insure communications while the patrol is operating. Many times when enemy sightings were picked up by Army aircraft, timely warning was given patrols operating in the vicinity by SCR-300 radio. Without this efficient means of radio communication this would not have been possible. To have dropped a message from the L-19 might have given away the position of the patrol.

In deciding whether to equip a night patrol with a radio, unless they are assigned a special task, remember that the burden of this equipment on difficult terrain, plus the noise of the radio set sometimes make it a liability to the patrol.

In planning a patrol task that involves a stream crossing it might be well to acquire some rubber rafts from the Air Force. These rafts work far better than the two-man engineer assault boat, take less time to inflate, and are easier to carry to the water's edge. On the Han River these Air Force four-place rafts were used with success by the 15th Infantry Regiment during the period February-March 1951 in sending night patrols across the river just east of Seoul. In planning night patrols remember to give the patrol leader one specific task; he will have all he can do to accomplish this one job and return. To load him down with numerous tasks will in all probability result in confusion and failure.

Selecting and establishing one, or perhaps two, regimental OP's to be operated by the I and R Platoon is another problem confronting the S2 in a new sector.

Plan for SCR-300 radio and telephone communication at each OP. Hourly check by telephone is desirable from operating OP's. It is good security practice to use the SCR-300 radio only when the land line fails.

Range cards prove well worth the effort and you should require each OP to make one.

The telescope is invaluable; try to get one for each OP manned even though existing TO&E's do not provide for this.

Employing your counterfire platoon is another major responsibility. In Korea, this unit was most useful when operating under regimental control. There are exceptions to this, of course, but with attachment they cannot normally give the coverage you want in most situations.

It is hard to visualize the intricate detail of Korean terrain from study of 1:50,000 maps alone. A terrain study of each new area is

well worth the time it requires. The "military aspects of the area" portion of the terrain study form will be of particular value to your regimental commander and other staff officers. A road net overlay, checked by I and R Platoon reconnaissance, is also highly desirable.

Although there is fair map coverage of any area in Korea you will be concerned with, certain road and trail information will have to be checked whenever a new sheet is used in an operation. This will be particularly true of secondary roads and trails which frequently will not be passable in rainy weather. On the plus side, many trails suitable for hand carry of food and ammunition in mountainous terrain will not show on these maps.

Basic cover air photos available to the regiment will often be more than one or two months old. Such photos are less than ideal as map supplements. Altitude and cloud formations in many cases obscure the most needed details of road nets and possible objective areas. However, you will find that your Army Aviation Section can give you surprisingly good coverage of a limited area to your front as well as pin point locations of interest. Average time of delivery after your request will be 48 hours if the weather will permit flying the mission. Requests for high performance aircraft may prove disappointing. Don't underestimate what the L-type aircraft and a camera can do.

One ¼-ton trailer will move the S2 section complete with map supply, field desk, tables and chairs, as well as personal equipment of the section. If you find it's not adequate, it's time to start throwing something away!

Your job as an S2 in Korea will be trying but it can be one of the most satisfying assignments you may receive there. The foregoing information should ease some of the bumps you'll encounter.

"The supreme lesson of World War II is that scientific research and development holds the key to military strength and national security."

Maj Gen Henry Aurand
"The Future Knocks at Our Door"
Army Information Digest, *May 1947*

SUPPORT COMPANY— AIRBORNE INFANTRY

By CAPT K. D. MERTEL, Infantry

The quick and precise commands of the heavy mortar platoon leader rang out on the hillside:

"PLATOON
HE
DEFLECTION ONE SEVEN FIVE
PLATOON
FIVE ROUNDS
ELEVATION ONE THOUSAND
CHARGE FIVE AND ONE-HALF
FIRE"

In the space of 15 seconds, 20 rounds of high explosive mortar shells were on their way to burst on the enemy counterattack. To the airborne Infantrymen receiving their support, the thunder of exploding TNT packed shells was a familiar and welcome sound.

At the OP the FO from the 1st Mortar Platoon scanned the terrain for more targets. He looked to his front where the road thru the middle of the regimental zone passed over a long high ridge. There, nosing up over the ridge with a rumble of powerful engines, came a platoon of tanks — Chinese Communist tanks. They waddled into an open area off the road — coming closer — 1000 yards away — 900 — 800 — 700 — still moving in. Their machine guns spit deadly long-range fire; long-barrelled 85-mm guns moved to and fro looking for targets — found one and let fly with high velocity shells.

Now there is movement in the airborne area. Camouflage is stripped from a long barrel; a gun is loaded; a clear eye to the sight — "READY — FIRE." A terrific clap of sound and a 90-mm shell screams past, striking the lead tank in the track. The tank spins slowly to the right and stops, its lightly armored side facing the 90. Another shell finds the vulnerable side, pierces the tank and sets-off the ammunition inside — a tank out of action.

To the right, a hundred yards away, the 90's twin brother has wasted no time. In deadly duet the two guns send round after round across the 700 yards to bore through armor plate. Another tank goes out of action; a third. The remaining tanks turn tail and slip over the ridge away from destruction.

It is firepower like this that makes the present airborne regiment a tough customer to tangle with.

The weapons providing this reception for the CCF were not attached or in support. They are weapons organic to the airborne Infantry regiment, in fact, organic to one company in the regiment, the *Support Company*.

Support Company? What is it? What weapons does it use? What is its mission and how does it fit into the airborne picture?

The Support Company's mission

appears in *Table of Organization and Equipment, No. 7-34, Department of the Army, 1 April 1950, SUPPORT COMPANY, INFANTRY REGIMENT, AIRBORNE,* as amended by Changes 1 and 2 and DA Circular 10 dated 15 February 1951. That mission is *to furnish close heavy mortar support and anti-tank protection to elements of the airborne Infantry regiment.*

Let's go a bit further and see what its capabilities are as listed by the same T/O&E. A Support Company is capable of *antitank protection; rapid emplacement and displacement; rapid maneuver on roads; limited maneuver across country; limited ammunition supply; limited local security; and landing by parachute and aircraft.*

In brief, the Support Company is organic to the Airborne Infantry regiment, and provides heavy mortar support and antitank defense in much the same manner that the old cannon company and antitank company did in an Infantry regiment of World War II and similar to that of the heavy mortar company and tank company in the Infantry regiment today. It is the airborne regimental commander's own light artillery to close the gap between his 81-mm mortars and the 105's of the artillery. It gives him a very strong backbone and a long range punch in his tank defense.

ORGANIZATION

One of the largest and most powerful companies in the airborne Infantry regiment, the Support Company, consists of a company headquarters, two identical heavy mortar platoons, and one antitank platoon. Its strength — 196 enlisted men and seven officers, including one warrant officer. It is completely motorized, has its own communications system, a fire direction center, and is responsible for its own ammunition supply.

The company organization is shown in Figure 1.

EQUIPMENT

If you have been staggered by the amount of equipment and transportation organic to a battalion, regimental headquarters and headquarters company, or a service company, you'll probably look twice at the equipment organic to the Support Company. Major items are shown in Figure 1 — see T/O&E 7-34, with Changes, for a detailed breakdown. It is the only completely motorized company in the airborne Infantry regiment except service company. Communication equipment rivals that of the Infantry battalion headquarters company.

An examination of the sections and platoons of the Support Company indicates how it is able to carry out its mission.

ANTITANK PLATOON

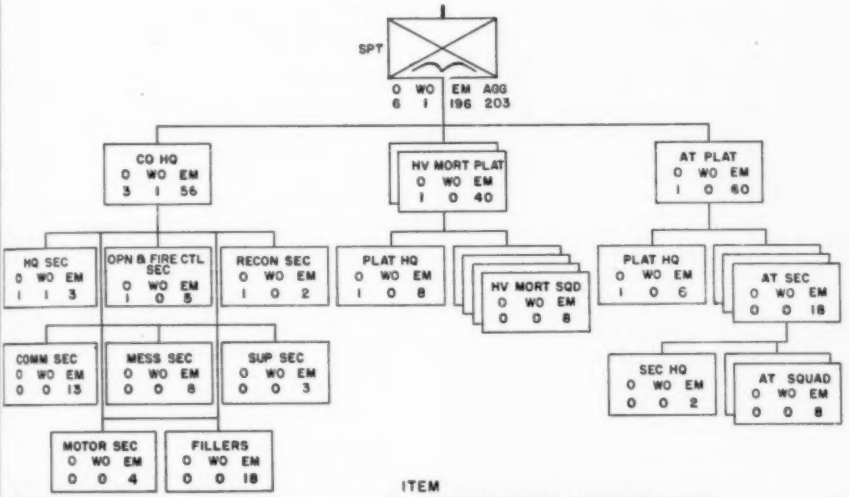
The organization of the platoon and the responsibility of each member follows:

1. Platoon Headquarters: (one officer, six enlisted men).
   Platoon leader — lieutenant — administers, disciplines, trains, and tactically employs the platoon.
   Platoon sergeant — master sergeant — second in command; assists platoon leader.
   Transportation corporal — corporal — maintains the six 2½-ton trucks, one ¾-ton truck and 1-ton trailer, and four ¼-ton trucks.

Light truck driver — private first class — operates ¾-ton truck assigned to platoon headquarters. It is used primarily to carry ammunition.

Radio telephone operator — private first class — operates platoon radio AN/PRC-10.

All members are armed with the carbine except the drivers who



ITEM		ITEM	
CARBINE, CAL .30, M2	82	REMOTE CONTROL EQUIPMENT R-C 289	1
CARTS, AMMUNITION, 4.2-INCH, CHEMICAL MORTAR	16	RIFLES, CAL .30 MI	72
GUN, ANTITANK, ON CARRIAGE, AIRBORNE (GUN 90MM T-6 ON CARRIAGE T5E2 CURRENTLY ISSUED)	6	EMERGENCY SWITCHBOARD, SB 18/GT	2
GUN, MACHINE, CAL .50, M2 HB	7	SWITCHBOARD, SB 22	1
GUN, SUBMACHINE, CAL .45, M3A1	25	TELEPHONE, EE-8	8
LAUNCHER, ROCKET, 3.5-INCH, M-20	9	TRAILER, 1/4-TON, 2W CARGO	7
MORTAR, 4.2-INCH, M2	8	TRAILER, 1-TON, 2W CARGO	13
PISTOL, AUTOMATIC, CAL .45, M1911A1	28	TRAILER, 1-TON, WATER TANK, 2W, 250 GAL	1
RADIO, AN/RC 7	1	TRUCK, 1/4-TON, UTILITY, M 38	12
RADIO, AN/RC 9	1	TRUCK, 3/4-TON, CARGO, M37	13
RADIO, AN/PRC 10	10	TRUCK, 2 1/2 -TON, CARGO, W/WN	8
REEL, EQUIPMENT, CE 11	7	WIRE, WD-1, MILES	20

Figure 1. Organization Chart, Support Company

Liaison agent — private first class — trained in and used as required in communications, as a messenger, liaison work, or instrument operation.

Messenger — private first class — also operates ¼-ton truck assigned the platoon leader.

carry submachine guns.

2. Section Headquarters: (two enlisted men):

Section leader — sergeant first class — trains, disciplines and employs the section.

Light truck driver — private first class — drives the section head-

quarters ¼-ton truck and operates its radio, AN/PRC-10.

The section leader is armed with a rifle, the driver, a submachine gun.

3. Squad (eight enlisted men):

Squad leader — sergeant — trains and disciplines the squad; responsible for emplacing, laying, and firing the antitank gun. Gunner — corporal — lays the weapon for direction and elevation and is assistant squad leader. Assistant gunner — private first class — loads and fires the weapon.

Ammunition bearers — privates first class (four per squad) — carry ammunition and prepare it for firing.

Light truck driver — private first class — drives and performs first echelon maintenance on the 2½-ton prime mover assigned to the squad.

Members of the squad are qualified to perform all duties and positions within it.

The squad armament calls for a *gun, antitank, on carriage, airborne*. Since the particular weapon has not yet been decided upon, the squad is now issued a gun, antitank, 90-mm T8, on carriage T5E2. The squad leader and driver are individually armed with rifles; the gunner and his assistant, with pistols; and the ammunition bearers, with carbines.

The antitank gun normally uses three types of ammunition — *high explosive* (HE), *hyper velocity armor piercing* (HVAP-T) and *armor piercing cap* (APC-T). HE is generally used against personnel and small structures; HVAP-T and APC-T against armored and wheeled vehicles, pill boxes, and other type fortifications. Ammunition is also available in "smoke" for screening purposes. HE comes with point detonating, delayed action, and time fuses. APC-T is all *base detonating*. All ammunition is of *fixed type* with an average weight of 42 pounds for the complete round.

The platoon uses both wire and radio in its communication. It has four radios, AN/PRC-10, one in each section and one in platoon headquarters. A similar net using wire for both sound power and EE8A phones connects the sections and headquarters.

It is desirable to employ the antitank platoon in general support when the situation permits. It may be necessary to attach sections of the antitank platoon to a battalion. This is particularly true when a battalion participates in an independent mission. In defense, the platoon may remain under company control with the platoon leader serving as the regimental antitank officer coordinating regimental AT defenses. Regardless of the mission, guns should be employed *as a section* in order to be mutually supporting.

The platoon may fire long-range indirect fire missions. Then special sighting equipment is authorized. When employed in this manner, the platoon ties-in to the company FDC and all fire commands come from the FDC.

Positions are changed frequently because the weapon's terrific muzzle blast may disclose the position. This characteristic requires the selection and preparation of numerous alternate positions. Prime mov-

ers remain constantly under the section leaders' command and near gun positions to facilitate displacement since it is not practical to displace the gun by hand.

Gun positions are generally pinpointed by the regimental commander (S3) upon recommendation of the support company commander. When sections are attached, the positions are selected by the unit commander upon recommendations of the platoon or section leader.

MORTAR PLATOON

The two mortar platoons are identical. Their organization and responsibilities of personnel follow:

1. Platoon headquarters (one officer, eight enlisted men).

   Platoon leader — lieutenant — administers, disciplines, trains, and tactically employs the platoon.

   Platoon-sergeant — master sergeant — second in command; assists platoon leader.

   Forward observer — sergeant — operates the platoon forward observation post and adjusts mortar fire, using the AN/PRC-10.

   Instrument operator — corporal — a specialist on maps and map reading and the aiming circle, lays the battery for direction and elevation, and may serve as a fire direction specialist in the FDC.

   Transportation corporal — corporal — maintains the five ¾-ton trucks and a ¼-ton truck assigned to the platoon.

   Liaison agent — private first class — trained in communications, as a messenger, in liaison work, in instrument operation, and as an FDC operator.

   Light truck driver — private first class — operates the ¾-ton truck and 1-ton trailer, used primarily to transport ammunition, assigned to platoon headquarters.

   Messenger — private first class — operates the ¼-ton truck assigned the platoon leader.

   Radio telephone operator — private first class — operates a platoon radio, AN/PRC-10, at the gun position.

   The platoon leader, platoon sergeant and radio telephone operator are armed with carbines; the drivers with submachine guns; and the others with rifles.

2. Squad (total of eight — four per platoon; eight enlisted men per squad).

   Squad leader — sergeant — trains and disciplines the squad; emplaces, lays, and fires the mortar.

   Mortar gunner — corporal — lays gun for direction and elevation; serves as assistant squad leader.

   Assistant mortar gunner — private first class — assists the gunner in cross leveling the sight and loading the mortar.

   Ammunition bearers — privates first class (four per squad) — carry ammunition and prepare it for firing.

   Light truck driver — private first class — operates and performs first echelon maintenance on the ¾-ton truck and 1-ton trailer assigned to the squad.

   The squad is armed with a 4.2-inch mortar, M2 — the same weapon used in the Infantry heavy mortar company and chemical mortar units.

   The squad leader and one ammo bearer are armed with rifles; gunner and assistant gunner with pistols; driver with submachine

gun; and remainder with carbine.

Ammunition for the mortar is either *HE* or *smoke*. Three types of fuzes are used with HE: *superquick* against light construction and personnel in the open; *delayed-action* to destroy buildings, entrenchments, and fortifications; and *time* to produce an airburst with maximum blast and fragmentation against personnel. Smoke shells are *white phosphorus* (WP) and *FS smoke*. These shells are used to reduce effectiveness of enemy fire; to blind, hamper, and deceive the enemy; for signals and communication; and for fire adjustment. Additionally, WP is highly desirable for its incendiary casualty-producing effect. Chemical type fillers are also manufactured for use with this weapon. Maximum weight of a completed HE round ready to fire is about 25 pounds.

The mortar possesses a rate of fire of 40 rounds the first 2 minutes, 100 rounds the first 20 minutes, and 60 rounds per hour in prolonged fire. This rate can be increased, and has been in Korea for short periods of time, depending on the tactical situation and availability of ammunition.

Observation is effected by the FO assigned each mortar platoon, additional personnel sent out by the company commander, FO personnel of other units, and by other unit commanders. Aerial observation is highly efficient and is used when aircraft are available.

Excellent communications, either wire or radio, are required. Both are desirable. Radio is used initially and in fast moving situations — wire when time and tactical considerations permit. Company wire teams lay wire when platoons operate under company control. When operating as a platoon, communications are handled by the platoon assisted by communications personnel from company headquarters.

If prearranged fires are planned, especially in the defense, a simple survey can be made. Members of the operations and fire control section, reconnaissance section and instrument operators in the platoon, under supervision of the reconnaissance officer, use aiming circles to make it.

Gun positions are of several types. *A primary position* is one from which the mortar can best fire its primary mission. An *alternate position* is one from which the same mission can be fired as from the primary position. Several alternate positions are desirable in the event of enemy counterbattery fire. A *supplementary position* is a position from which missions other than those of the primary or alternate positions may be fired. An *off-carrier position* is a point at which weapons and their initial supply of ammunition must be removed from the carrier and hand-carried to the firing position. It is best located in defilade, should afford concealment and be near the firing position. The *covered position* provides cover from enemy fire for personnel and equipment not required at the firing position.

Mortar platoons *displace by sections* for continuous support. Usually, the company plan displaces one platoon at a time to maintain continuity of fires.

COMPANY HEADQUARTERS

A look at company headquarters shows how it supports the platoons

and fits into the general picture. The organization of headquarters and responsibilities of its members follows:

1. Headquarters section (one officer, one warrant officer, three enlisted men):
   Company commander — captain — commands the unit.
   Unit administrator — warrant officer — supervises the administration, supply, and mess.
   First sergeant — master sergeant — primary enlisted assistant of the unit commander.
   Company personnel management clerk — corporal — assists the unit administrator.
   Bugler — private first class — drives ¼-ton vehicle and serves as orderly for the CO, is the unit bugler, and may be used as a messenger.
   All members carry carbines except the clerk who is armed with a rifle and the driver who has a submachine gun.
2. Reconnaissance section (one officer, two enlisted men):
   Reconnaissance officer — lieutenant — serves as executive officer of the unit, motor officer, communications officer, and reconnaissance officer — his primary assignment. Constantly looks for new gun positions, routes of advance and withdrawal, CP's and OP's. Makes all surveys required.
   Reconnaissance sergeant — sergeant — assists reconnaissance officer. Thoroughly trained in map reading, terrain appreciation, instrument operation, and observation of fire.
   Light truck driver — private first class — drives ¼-ton truck for reconnaissance officer, and may be used in communications or as a messenger,
   The reconnaissance officer is armed with a carbine, the sergeant and driver with rifles.
3. Operations and fire control section (one officer, five enlisted men):
   Gunnery officer — lieutenant — directs the fire direction center (FDC).
   Chief fire direction computer — sergeant first class — principal enlisted assistant to gunnery officer.
   Fire direction computer — sergeant — instrument operator.
   Fire direction computer — corporal — assists the chief fire direction computer.
   Horizontal control operator — corporal — assists the chief fire direction computer.
   Light truck driver — private first class — drives the ¾-ton truck and 1-ton trailer assigned to the section.
   The gunnery officer is armed with a carbine; the driver, a submachine gun; and others with rifles.

The gunnery officer and members of this section make up the FDC. The FDC gives fire commands to the mortar platoons and occasionally to the antitank platoon. Each member is trained to operate instruments, observe fire, conduct surveys, and to carry on fire direction procedures necessary to change fire requests of the FO into fire commands for the guns, using the target grid system of operation and conduct of fire.

The FDC is the brains of the mortar platoons. The ability to mass mortar fire from dispersed positions

and shift this mass of fire from target to target is one of the greatest tactical capabilities of the company. FDC provides: continuous, accurate support under all conditions of weather, visibility, and terrain; flexibility to engage targets over a wide area; prompt massing of company fires including the indirect fire of the antitank platoon; and prompt, simultaneous distribution of fire on numerous targets.

The FDC which enables the regimental commander to mass the fire of his weapons, is tied in with the 81-mm mortars, light aircraft net, and the supporting artillery battalion FDC so that an observer, infantry or artillery, anywhere in the zone of action may secure the type of fire needed. This method insures economy as the center determines the weapon appropriate for the target.

The FDC can operate in two sections — one accompanying each mortar platoon when attached to combat teams. Each section is then supplemented by the instrument operator and liaison agent from a mortar platoon.

The FDC and company CP are most desirably located near the mortar gun positions to insure efficient communications and control. If these positions are widely separated, FDC and the CP may be a considerable distance from the guns to tie in all fires.

4. Communications section (13 enlisted men):

   Communications chief—sergeant — operates the section.

   Senior wireman — corporal — supervises the wire team.

   Senior switchboard operator — corporal — supervises operation of the switchboard.

   Intermediate speed radio operator — corporal — operates radio AN/GRC-9.

   Low speed radio operator — private first class — operates radio AN/GRC-7.

   Wiremen — privates first class (total of two) — lay and retrieve wire.

   Radio telephone operator — privates first class (total of three) — operate radios AN/PRC-10 in the company net — with the CO and FDC. One operator drives a ¼-ton truck with trailer.

   Switchboard operator — private first class — a member of the wire team and drives a ¾-ton vehicle with trailer.

   Motor messenger — private first class — member of the wire team and drives a ¼-ton truck with trailer.

   Motor messenger — private — delivers messages and drives a ¼-ton truck with trailer.

   The drivers are armed with submachine guns, the communications chief and AN/GRC radio operators with rifles, and others with carbines.

This section, assisted by platoon communication personnel, handles the unit's complicated wire and radio nets. It is organized with a wire team composed of the senior wireman, two wiremen, a switchboard operator, and a motor messenger. By attaching the other motor messenger and vehicle it can be split into two teams. The personnel in the section are trained as wiremen, as drivers, and as operators for all the radios.

A typical radio set is shown in Figure 2. Two channels are used on

the AN/PRC-10—one with mortars, another with the antitank sections. By switching channels, the commanding officer (also equipped with one of these sets) may contact either the mortar or antitank net. The

A typical wire net is shown in Figure 3. Here, antitank sections are attached to Infantry battalions. Lines from the company switchboard connect the mortar gun positions, their OP's, the CO and CP-

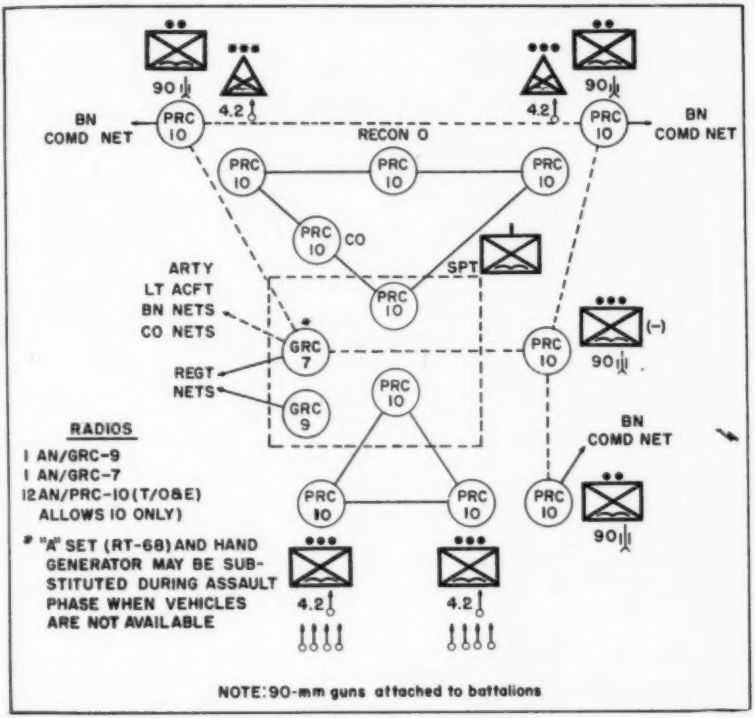


Figure 2. Typical radio set, Support Company

CP-FDC is tied-in with FDC of the artillery and with light aircraft by the AN/GRC-7 — and may contact other companies, battalions, and the regimental net in an emergency. Normally, the CP is tied-in with the regimental net by the AN/GRC 9.

FDC by EE-8A telephone. One telephone is retained for line checks and emergency use while another is used at the antitank platoon headquarters for contact with the regimental switchboard. Sound-powered phones (reel, equipment)

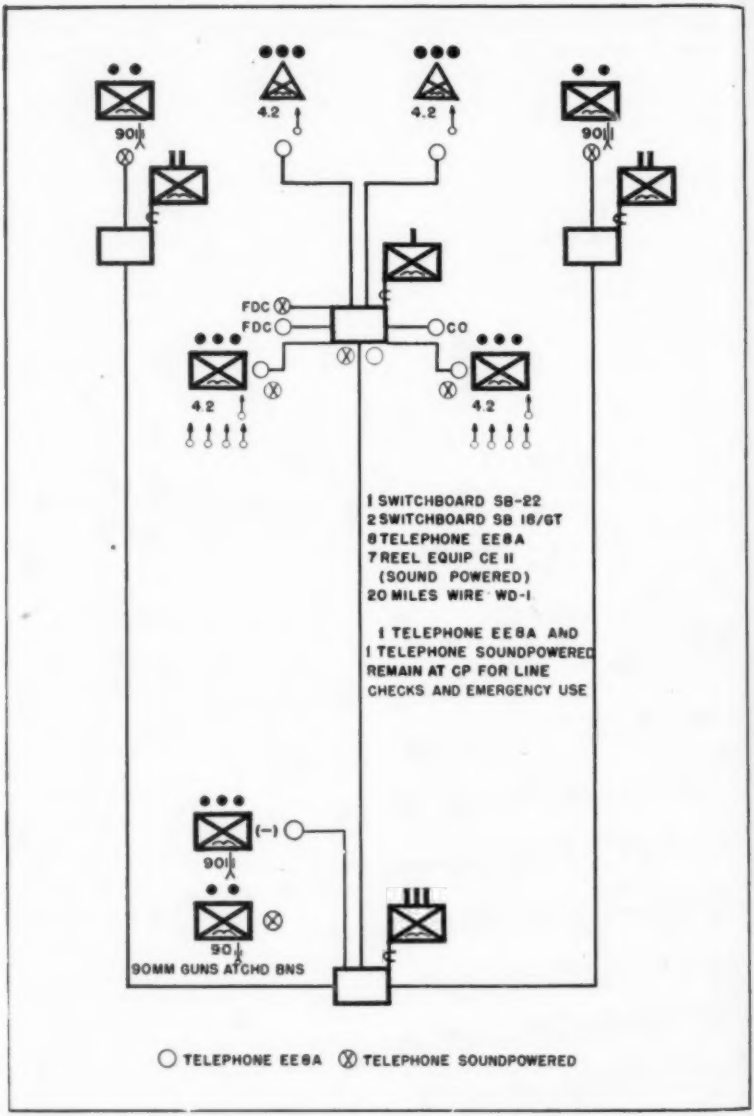


Figure 3. Typical wire net, Support Company

connect the antitank section to battalions to which they are attached, and the CP-FDC with each mortar gun position. Another is kept for line checks and emergency.

5. Mess section (eight enlisted men):

   Mess steward — sergeant first class — operates the unit mess. Cooks — sergeants (total of three) — prepare the food.

   Second cooks — corporals (total of three) — assist the cooks to prepare the food.

   Cook's helper — private first class — food service apprentice and drives the 2½-ton truck and water trailer with the kitchen.

   Members of this unit are armed with rifles except the mess steward who carries a carbine.

   All men are qualified drivers, trained in the use of the caliber .50 machine gun and 3.5-inch rocket launcher, and are often used in local area defense.

6. Supply section (three enlisted men):

   Supply sergeant — sergeant first class — handles the unit supply. Ammunition corporal — corporal — resupplies the guns with ammunition through control of the ¾-ton vehicles assigned to platoons, or others moving back to replenish the ASP.

   Artillery mechanic — corporal — within his capabilities, repairs all weapons of the unit. Drives the 2½-ton truck and trailer with the section. Assists the supply sergeant.

   Section members are armed with rifles except the ammunition corporal who has a carbine. They are qualified drivers and are trained in the operation of the caliber .50 machine gun and 3.5-inch rocket launcher.

   A *basic load* varies considerably with the tactical situation.

In all situations, a portion of the load is carried on the individual prime mover, a portion on the company and platoon vehicles, and the remainder with the regimental train. An airborne operation dictates limited ammunition and almost immediate resupply by air.

7. Motor section (four enlisted men):

   Motor sergeant — sergeant — operates the section.

   Wheeled vehicle mechanics — corporals (total of two) perform first echelon maintenance on company vehicles and train drivers. One of them drives the ¾-ton truck and trailer assigned to the section.

   Mechanics' helper — private first class — assists the mechanics.

   All members are armed with rifles except the mechanic who drives the truck. He is armed with a submachine gun.

The section has tremendous maintenance responsibilities — on a par with that of an Infantry battalion. It is equipped with three mechanic's tool kits and one kit, 2d echelon #2.

8. Fillers and replacements (18 enlisted men):

   Fillers, or replacement personnel, are assigned to the sections as required.

   All fillers are armed with rifles.

OPERATIONS AND CONTROL

The support company, particularly the mortar platoon, may be employed in four different ways — in *general support, direct support, attached,* or as a *reinforcement.*

Operating in *general support*, the company, supporting the regiment as a whole, controls its own platoons. As directed by the regimental commander, the company is prepared to shift its fires anywhere in the regimental zone of action. The company commander retains command of the unit and maintains close control of its fires. OP's, liaison personnel, and unit commanders send fire requests to the FDC which transmits fire commands to the platoons. General support is the favored method of control because it enables the regimental commander to have at his finger tips a tremendous amount of fire support with which to influence the action quickly and efficiently — without detracting from the support of a small unit. It also enables the company commander to maintain control of his unit and facilitates ammunition resupply.

Operating in *direct support* denotes that the company, or any part, gives close and continuous fire support to a particular unit. For example, each mortar platoon may be placed in direct support of an individual front line battalion or combat team. It then prepares to fire anywhere in the supported unit's zone of action. The platoon is not under command of the unit supported but its fires cannot be taken away without authority of the regimental commander. Although platoons operate under command of the support company commander, fire requests are received by the platoon FDC — two FDC's operating as related earlier in this article. Fitting his displacement plans into the supported unit's plan of action, the mortar platoon leader conducts his own displacement after first informing the support company commander to insure uninterrupted ammunition resupply. The direct support method is usually employed when the mission of one unit has priority or it is the only unit committed.

The support company or one of its platoons may be *attached* to a regimental unit. The antitank platoon or sections may be attached in similar manner. When attached, command is vested in the battalion commander. The support company commander maintains contact with attached units, formulating plans for their re-employment when they return to company control. He recommends to the regimental commander when such control should be re-established. Attachment of platoons is practical only: (1) when a unit has an independent mission; (2) when a unit is beyond supporting fires of the regiment; or (3) if communication is difficult.

A mortar platoon, or the entire company less the antitank platoon, may *reinforce* the fires of another mortar unit — such as an attached 4.2-inch mortar battalion — or an artillery battalion. FO's are furnished, if necessary, and liaison established with the reinforced unit. Fire requests are received direct from the reinforced unit. Command remains with the support company commander. This method of employing a unit is practical only when its use will not interfere with support of the parent regiment. Example — the support company, less the antitank platoon, may be used to assist another regiment when the parent regiment is in reserve.

TACTICS AND TECHNIQUES

The regimental commander prescribes the mission and methods of employing the support company. Acting as a special staff officer, the company commander maintains liaison with supported units, prepares his fire plan to conform with the regimental plan, and makes recommendations to the regimental commander for employment of his unit. Forward observers establish contact with supported units; request, observe, and adjust mortar fire.

The fires of support company are coordinated with the fires of other weapons supporting the regiment. These fires are fitted into the regimental counterfire plan through coordination with the counterfire platoon. (Heavy mortars are the regiment's primary counterbattery weapon.) The company coordinates with the direct support artillery battalion through the Fire Support Coordination Center and through communications established between the company's and the artillery battalion's FDC's. The coordinated use of observers insures coverage of the entire zone of action.

Techniques of movements, halts, occupation of assembly areas, and security, in general, parallel those of Infantry units. Since the support company is completely motorized, most movements are by motor—except during an airborne operation.

If its mission is to be accomplished, support company (particularly its mortar platoons) must select, occupy, and organize positions rapidly.

Company and platoon positions should:

Permit using the full range of the mortars with maximum and minimum limits.

Provide concealment and defilade.

Be near routes of travel with covered approach from positions to ammunition resupply.

Be located on firm soil to support weapons and provide fortification material.

Be located for ease in providing security.

Provide as much shelter and comfort for personnel as possible.

Possess routes for displacement.

The shortest communications lines consistent with maintaining adequate dispersion is the ultimate goal. Position areas are usually selected by the commanding officer or reconnaissance officer while platoon leaders select exact positions for guns and the platoon CP's. Antitank guns are emplaced to cover likely tank approaches.

FM 7-37, Heavy Mortar Company covers other tactics and techniques for the mortar platoon. *FM 7-20, Infantry Battalion* and *FM 7-40, Infantry Regiment* relate particulars on employment of antitank guns.

LOCAL AA AND AT DEFENSE

A total of seven caliber .50 machine guns provide the means for antiaircraft defense for the company — and may also be used against ground targets. All are vehicular mounted and are assigned to headquarters section, communication section, each antitank section, and each mortar platoon. The company depends primarily on camouflage and other passive measures as protection against air attack.

The company has nine 3.5-inch rocket launchers, assigned one each to each antitank squad, each mortar platoon, and the CP. These are used for close-in defense against armored attack.

AIRBORNE OPERATIONS

The support company is completely air transportable but requires a large number of aircraft to move all of its equipment and vehicles. The continued development of the larger type transport such as the Douglas C-124, Fairchild C-119 and C-120 Packets, and such assault transports as the Chase C-122 and C-123 will facilitate further air transported operations.

During Exercise SWARMER, a joint exercise held in the spring of 1950, all men and equipment of the support company, including simulated ammunition, were dropped by parachute or air-landed successfully using aircraft currently available. These consisted primarily of the C-82 and C-119.

Antitank guns are given priority in the establishment of an airhead because lack of supporting armor within the airhead makes it vulnerable to an armored attack. The prime movers for the guns have the same priority.

All equipment of the company can be parachuted, although dropping the 2½-ton truck and 90-mm antitank guns with multiple chutes is not widely used in actual operations due to excessive aircraft requirements. Upon completion of the new airborne antitank gun, this problem will have been solved.

"Killer teams" — organic squads armed with two 3.5-inch rocket launchers and having two ¼-ton trucks for transport — provide antitank defense in the early phases of an airborne operation. Prior to the arrival of the 90-mm antitank guns, a total of six such teams constitute the principal antitank defense. Killer teams have been used successfully by the airborne as well as by other type units in Korea — particularly during the early days of the war.

A portion of the ammunition basic load is dropped with both mortars and antitank guns. The remainder is dropped with the troops as *accompanying* supply and is left on the drop zone to be recovered by personnel under direction of the regimental S4. Immediate resupply is effected by carrier parties from the regimental ammunition supply point to the gun positions. Additional resupply is provided by air resupply missions. Large cargo carrying parachutes used during these missions permit large containers of ammunition to be dropped near the gun position. Ammunition is the major item in resupply requirements.

Mortar platoons initially move mortars and ammunition on the mortar carts dropped with the guns. This method of transport means slower employment and displacement with limited ammunition supply. Using the heavy drop technique, it is possible to drop the organic vehicles of the company with the assault echelon.

All communication equipment is dropped on the parachutists in GP bags or in accompanying bundles and then hand-carried until transportation is available. It is protected against shock when dropped by parachute, and extra equipment is dropped to insure adequate serviceable material on the ground.

FUTURE DEVELOPMENTS

Present thinking visualizes changes in organization of the support company. These changes would be made to the end of permitting the company to give more efficient *close heavy mortar support* and *antitank protection.*

The antitank platoon should be replaced by a third mortar platoon — making the support company a unit similar to the heavy mortar company of the Infantry regiment. In an airborne operation elements of all battalions may be used to seize the airhead; frequently the battalions must defend on extended frontages. These factors coupled with the initial shortage of artillery and the absence of armor make imperative the need for more mortars.

Since the heavy mortar is the chief counterbattery weapon, the counterfire platoon of regimental headquarters might more appropriately become a part of the new company. It could easily be supervised by the company commander. This platoon would be about the same as presently organized.

With the advent of a new antitank gun, or by using the new 105-mm recoilless rifle, vehicular mounted, an *airborne antitank company* could be organized — a separate company comprising three antitank platoons, plus the antitank mine platoon from regimental headquarters company. Each platoon would consist of two sections instead of the present three, preventing a cumbersome organization. This organization would permit employment of a platoon with each battalion during early phases of an operation, in those cases where employment in general support is not practicable.

However, as it stands, the support company is a powerful tactical unit with very important missions and it possesses high standing within the airborne Infantry regiment. Support company goes a long way in providing necessary support in the seizure of an airhead. The proposed changes would increase regimental capabilities for close heavy mortar support and antitank defense. Further, it would permit a more satisfactory answer to the constant question of the unit commander, "How much heavy mortar and antitank support do I get on this mission?"

"There is one characteristic of the military profession that carries us through the stormiest attacks and the direct misunderstandings; that is, the fundamental integrity of the Army and of its officers and men."

Maj Gen Wilton B. Persons
"They Said"
Army Information Digest, *May 1947*

SQUAD RECONNAISSANCE PATROL, KOREA

By LT WILLIAM F. STROBRIDGE, Infantry

EDITOR'S NOTE: *This is an account of an actual patrol action in Korea, written by the patrol leader. It must be remembered that the actions and techniques presented here are those actually used on the patrol and that in some instances they may not agree with present doctrine on patrolling in general.*

"The second squad is going to get across if it takes all night — that's for sure." There was finality in the words and voice of the squad leader. The ten men around him offered no comment to this conclusion to the orientation on their impending night patrol.

Having crossed the Han River a month earlier, the 3d Infantry Division was drawing up to the banks of the Hantan River just north of the 38th Parallel. Reconnaissance patrols were attempting to determine stream depths and the strength of enemy positions, located by observation, on the north bank of the river. This patrol by a squad of the regimental I and R Platoon was to be one more attempt to get the needed information. It wouldn't be easy.

Enemy artillery fire was landing intermittently near A-1 (See Map) and sharp barrages greeted anybody approaching the ford at A-2. Mines were reported by friendly Koreans at the ford's north approach and near the town of Sarang-ni. In addition, enemy troops in squad and platoon strength had been observed on Hill 138.

A daylight patrol from the second battalion, 7th Infantry, had run into an enemy ambush near A-2, sustaining eight casualties. Two night patrols in the same area had made no contact but were unable to locate a ford in the river. Now a squad of the I and R Platoon was to attempt a night patrol to locate a ford for foot troops and, if possible, tanks and to determine what defenses the enemy had north of the river as far as Hill 61.

From a map reconnaissance, the squad leader had selected the area around the railroad bridge as a tentative crossing site and about an hour before dark had assembled his squad in the second battalion's hilly position.

"Can everybody see to my left front? — O.K. — ," and the squad leader began issuing his instructions. "The battalion OP's have seen trenches and dugouts along the north bank of that river." The squad members could not see the water of the stream but by following the contour could make out the river's location.

"They think the enemy FO who's been keeping it hot there (A-1) and

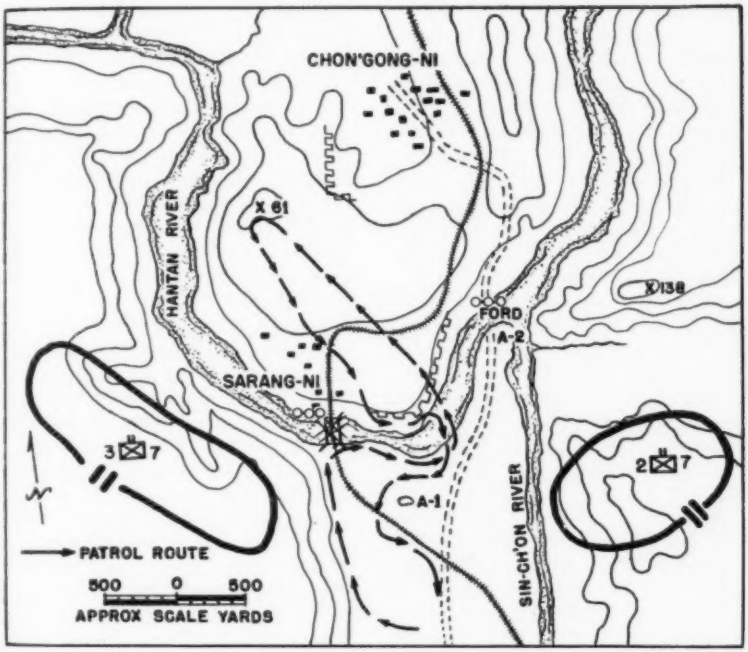
there (A-2) is over on that bare hill (Hill 138). As you can see our artillery has been working the hill over. On the flats to the right of the road is where the patrol got shot-up yesterday.

"Now, Third Battalion is on those hills across the valley. We won't go into any of their positions. The British will have a patrol out tonight but they'll be way downstream from us.

"Tonight we're to find a place for troops to cross the stream, and if possible, tanks too. After that we'll see just what Joe Chink has got on the north bank. We will go no further north than Hill 61 which is on that rise over there."

The sergeant went on to break his squad down into three teams, one recon, one support, and one security. Each team had a man armed with a carbine in addition to the TO&E M1 rifles. All men carried two fragmentation grenades as well as a white phosphorus grenade. An SCR-300 radio provided the squad with communications.

"The lieutenant" (platoon leader), continued the sergeant, "is going to be here with a 300 so we can talk direct instead of relaying through battalion so we won't have



Patrol Map

to mess with coordinates. We will use check points. Number 1 will be opposite the railroad crossing, '2' the south bank, '3' the north bank, and '4' Hill 61.

"Oh, yeah, the ROK's said there are mines where the road fords the river and over by the town near the railroad bridge so watch your big feet. Any questions?" he asked.

The platoon leader told the sergeant he would make another check with the line companies to insure that the patrol's operation was known to all as the squad moved down into the valley in single file.

"Well, whadda ya know — the mighty I & R come down from regiment to get into the war," cracked a member of the three man outpost near the base of the hill.

"Blow it," growled a squad member as they headed across the valley floor in the gathering gloom of night. The three teams were each separated by a distance of some ten yards as they threaded silently along the route to the river. Silence became automatic as they left friendly positions behind.

Still being light enough to see the dim outline of the road and the dark rim of the railroad track, the squad leader, second man in the recon team, halted the patrol with a signal which was quickly passed back. Each man silently faded into the ground.

"Radio check point 1," softly spoke the squad leader, and the message was whispered back to the 300 operator in the security team led by the assistant squad leader. The patrol's location was sent and acknowledged.

The patrol continued on in single file and as they passed to the left of a grove of trees the squad leader turned and whispered. "Tell 'em they are now crossing the 38th parallel and are heroes." He had located the point by checking the map with the ground prior to darkness.

Moving on in the shadow of the hill mass, the patrol halted from time to time for any sign of danger. Finally, the squad leader heard the sound of running water disclosing the proximity of the river.

Deploying his men in support and security roles, the squad leader and three other men comprising the recon team, including a Chinese-speaking South Korean, moved toward the railroad bridge. A brief inspection showed only a few yards of floor standing, the rest having been destroyed in some previous withdrawal.

Hearing the rapid sound of water over small stones, apparently marking a shallow spot upstream a few dozen yards from the bridge, the squad leader had the rest of the men brought up.

Utilizing ditches and a crater just east of the railroad bridge, the squad leader put his support team where they could fire to the north of the river as well as along the river bed. The assistant squad leader put his team in a semi-circle covering the flanks and the rear and had the radio-operator notify the platoon leader of the patrol's new location.

One of the men stumbled while crossing the railroad and sent a shower of gravel rattling down the embankment, causing everybody to freeze momentarily.

"O.K., let's go swimming," spoke the squad leader and the recon team slid quietly down the steep bank to the stream's edge. Peering

into the darkness, the leader could tell that there was a shallow strip about fifteen yards to his front because of the ripples made in passing over small stones but wondered about the silent space in between. Stepping into the stream, the cold water quickly rose to the squad leader's chest. Placing one foot forward, he was unable to feel bottom. He turned and rose dripping out of the water, cursing softly.

"Never make it here, there's a deep channel in between," said the squad leader. The South Korean made a brief reconnaissance upstream, finding the deep channel to be of some length.

The team rejoined the rest of the patrol and the words "no good" spread among its members.

In single file the squad moved upstream and repeated the procedure with the same results.

A third spot still further upstream was selected by the squad leader and again the recon team went down to the river bed.

"What's this? Barbed wire!" said one member. For the first time wire was found at the water's edge — a single apron.

The squad leader pulled wire-cutters from their case on the back of his cartridge belt and began carefully to cut a gap through, feeling the ground cautiously for any signs of mines with each step.

After clearing the gap, he instructed two men to remain at the opening in the wire, and, with the South Korean, began to edge into the water.

Finding it only knee deep and not too swift, the pair came to a rocky sand bar some five yards wide. The squad leader again stepped off while the South Korean watched his movement. A swift, two-foot current nearly swept him off his feet and he leaped back to safety.

"Never happen, Lim," he said, and the pair worked their way upstream to the end of the sand bar, where once again the rippling sound of water over small stones offered possibilities.

This time the squad leader took the prone position and observed while the South Korean moved forward into the stream. He watched the Oriental disappear into the darkness. Evidently, this was a much wider spot. In a few minutes the ROK returned. "O.K., sergeant."

The ROK went back to guide the rest of the squad to the crossing site. Moving behind him they came up and crossed a twenty-yard strip of water to a sandy point.

Suddenly halting, the squad leader exclaimed, "This isn't it — this is another stinking sand bar!" At the same time a flicker of light to his right front had the squad automatically flattening out along the sand.

Calling his assistant squad leader up, the sergeant told him to deploy the squad as best he could for safety from mortars. "Lim and I will see if we can get across this strip of water to the bank. Its quiet and probably deep. That light looks like it was coming from a bunker so there must be somebody up there. If I throw a white phosphorus grenade, it means I'm sunk and for you guys to bug-out."*

*"Bug-out, a slang term, originating in Korea, meaning to retreat, abandon a position. Normally, in order to carry out its mission when its leader becomes a casualty, a patrol reorganizes under the next in command and continues patrolling.

The squad leader and South Korean moved into the water which quickly became chest-deep. Carefully feeling ahead with each step, they reached the north bank and halted — afraid to risk the noise of stepping out of the water.

"I think Chinese boy," whispered the ROK as they both gazed at the flickering blue light to their right front.

Finally, the squad leader sighed and whispered, "O.K., let's go," and the pair edged out of the water and inch by inch onto the bank, burned black by a white phosphorus shelling.

Crawling slowly up the bank and both audibly shaking from the cold, the two moved the ten yards in ten minutes, finally nearing the edge of a trench. At the same time the moon began to break through the scattered clouds. The squad leader slid in, followed by the ROK, and decided to scout the entire entrenchment toward the light before sending for the rest of his squad.

Along the river, the rest of the squad lay in the sand shaking from their dip in the cold waters. The assistant squad leader wondered why the squad leader was taking so long and debated as to whether another pair should follow to investigate.

Back in the trench the pair edged along and halted at the entrance to a bunker. The ROK whispered in Chinese, receiving no answer. The squad leader reached in with his hand and felt only sand. With bayonets in hand, both slid in and thrust to the opposite walls meeting emptiness.

Still puzzled by the light, the squad leader crawled out of the trench and met the light face to face. A tiny piece of white phosphorus was wedged into a small stump and was still burning, its flickering giving all appearances of a candle burning in the bunker.

"Chinese have no," grinned the squad leader and he sent the ROK back for the remainder of the patrol while he remained to observe.

The assistant squad leader began moving his men to the squad leader's position. Near the end of the file one of the I&R men, already badly scared by the river fording, couldn't face the idea of going further into enemy territory. "I'm going back," he stuttered, and turned around.

"No you're not," growled the radio operator. At the same time the attached medic, who had volunteered for the patrol, hissed, "What's the matter? Aren't you on this team? Move out!"

The hesitant squad member turned again and followed the patrol to the trench.

A search turned up no enemy on the river's edge. Only a Chinese cap was found.

The squad leader ordered a change in men carrying the SCR-300.

After radioing its location, the squad moved cross-country in a north-westerly direction, moving rapidly toward Hill 61. Walking around the edges of abandoned wheat fields, they rushed across the railroad tracks and resumed their single file march. A single red flare lit the sky over the village to the north.

As they reached the bottom of the slope culminating in Hill 61, caution again became instinctive and the recon team edged its way to the top. Finding no positions, the

squad formed a circle near the peak while the radio operator notified the platoon leader they had reached check point 4.

After a quarter hour of silence, observing and listening for enemy movement with negative results, the patrol moved southeast off the hill and toward the village at the north end of the railroad bridge. Remembering the enemy habit of slipping down into villages at night to sleep and cook rice, the squad leader halted at the north end of town and crept forward to search two isolated houses in hopes of gaining a prisoner.*

The search was fruitless and the patrol skirted the town, moving down to the river bank and upstream to the crossing site. Eager to return, the squad leader neglected to call in check point 3, but immediately started across the river, not halting until he reached the opposite bank.

"What lucky bums," he said as his men collected around him. "O. K., take a break and radio the lieutenant we're at check point 2."

Resuming the march, the patrol reached the railroad tracks, crossed them and then turned south, keeping in the shadow of the embankment. Upon reaching the crossing they again turned down the road towards the second battalion positions.

Nearing the battalion's hill, relief swept the whole patrol and its members began whispering to each other.

"Halt," growled a voice in the darkness.

"Halt, hell, I'm freezin'," replied the squad leader and he continued on into friendly area.

"That you?" came the familiar voice of the platoon leader.

"Yes, Sir! We got it made," replied the squad leader. "No Chinks in those positions on the north bank — no hits, no losses. I'll draw a sketch of the place we crossed. What a time that was."

"You nearly had it," replied the platoon leader. "One company didn't know you were out there and were going to fire their 60's."

The squad leader muttered to himself and sank to the ground to join the rest of the squad in draining boots and wringing out socks.

The following day a company sized patrol of the 7th Infantry Regiment crossed the Hantan River unopposed and moving quickly up the peninsula, took some 20 prisoners northeast of Hill 61.

DISCUSSION

1. Squad leaders impressed with the goal of accomplishing a mission are essential to good patrolling. The squad leader's determination to cross the Hantan River was felt by the squad so greatly that when one of the member's fears got the best of him, others pushed him on. A less determined squad leader, upon seeing what was apparently a light in the positions along the river bank, would have returned and reported the enemy occupying defenses on the north bank of the river. This might have caused a useless assault river crossing.

*Although it is not so stated, it is presumed that taking prisoners was one of the tasks assigned this patrol. Few patrols were sent out in Korea without being charged with this task.

2. Recognizing the value of squad spirit, the platoon leader sent the full squad on the mission instead of selecting individuals from the entire platoon.

3. On return routes, patrols have a tendency to relax dangerously or throw caution to the winds and develop a "get the heck out of here" attitude.

So great was the relaxation of this patrol on the return route that the squad leader did two foolhardy things: not radioing his location on the north bank and not answering the challenge properly as he neared friendly positions. A less experienced sentry, not knowing the patrol was out or mistaking them for Chinese using English phrases, a usual habit, would have riddled the squad at such an answer.

Some of this carelessness might be corrected if training commanders would design some problems wherein no Aggressor contact is made until the patrol is on the return route. The tendency in training patrols is always to have Aggressor contact early in the problem. Actually much patrolling in combat results in no contact.

4. Double checking by platoon leaders when patrols are out helps assure the patrol's safety from friendly fire. Many times, especially at night, friendly fires disrupt our own patrols.

The platoon leader, by checking friendly units, prevented friendly mortars from firing in the patrol area.

5. The SCR-300 radio is a burden compared to the rest of the patrol's equipment, and recognizing this, the squad leader rotated the radio. One man carrying the radio throughout a patrol will slow the march considerably.

6. Native troops can be integrated into American squads in small numbers successfully. Their knowledge of the language of the enemy proves valuable in patrols.

◆

"Our front-line combat soldiers in Korea have been living and fighting under almost incredibly severe conditions of weather, filth, and emotional strain. In addition to the highest casualty rate, they must endure sleeping out-of-doors in mud, in cold, often without warm food, dry clothing, or bathing facilities."

General J. Lawton Collins, April 5, 1951, before Senate Armed Services Committee

RANDOM OBSERVATIONS, KOREA

By M/SGT P. M. GAVIN

The following comments are based on the author's observations while serving with the 7th Infantry Division in Korea. The comments represent his personal conclusions based on his experience and are not necessarily representative of other persons or units. Much of the comment is based upon combat experiences in the early days of the fighting and as such the deficiencies noted constitute a valuable lesson in training of units and individuals for combat. Deficiencies noted have since been corrected and the combat troops in Korea today represent as fine a fighting force as history records. The Korean conflict bares testimony that the teaching at The Infantry School is sound in every respect. The tactics and techniques which the author reports, while appearing in some instances to be at variance with established teachings and doctrine must be recognized as representing special application of principles resulting from the particular terrain and situations encountered in Korea. They are not necessarily applicable to terrain and situations which may be encountered elsewhere.

THE ENEMY

Offensive Tactics: The Chinese showed that they could adapt themselves to any form of warfare. Discovering that mass assaults failed, they tried infiltration and flanking tactics. The Chinese like to attack at night. They use flares and many automatic weapons; they throw grenades first and then open fire. They try to sneak up on the UN positions. Recognition sometimes is at only 4 to 5 feet. The attack is not overwhelming if a correct defensive perimeter is established and the men are dug in and have ammunition.

The Chinese marched a lot at night. In the daytime they used covered routes (sunken trails, etc.) and mountain trails that were almost invisible to aerial observation.

Their advance guard was usually company-size with a point. Their approach march formation was usually a small, scattered column, especially if they thought contact imminent. They used widely dispersed formations in the daytime because of the UN air power and tremendous artillery in direct support of our divisions. As soon as they came under fire they would dig in and wait for night to attack.

Much of their artillery appeared to be fired by map. They almost never seemed to have FO's although spies (sometimes small boys) occasionally transmitted observations to their firing batteries.

Their communication equipment is primitive. At times they lacked heavy mortar and artillery.

Defensive Tactics: The framework of their defensive set-up was an outpost line on the fingers of a mountain. Their MLR was usually supported by lots of mortars and a few pieces of artillery. Ammunition was plentiful and they rotated front line units often, especially if they were under Allied pressure. During Allied preparatory fire the Chinese would stay under cover and then when our attack began they would throw in a heavy volume of mortar fire starting when we were about 1000 yards from the

objective and continuing until our assault. They often fired machine guns at medium ranges; this machine gun fire would cover sections of trails on the ridgelines. When the Allied troops got close the Chinese would open up with small arms fire and the true fire-fight would develop.

During our assault phase, the enemy would drop or throw large numbers of Chinese grenades (usually the inefficient concussion grenade, but sometimes bolstered into a formidable weapon with 4½-pound blocks of TNT attached.) These were effective, but if you got close enough, the grenades would usually go over your head. When it came to close-in fighting, the Chinese would either run or stay in their bunkers. They were slaughtered when Allied troops got on top of them.

Those who got away would usually try to rally for a counterattack. Only rarely was such a counterattack coordinated, probably due to lack of communication.

They usually plastered the hills we captured with mortar fire and with automatic fire from other ridges. They withdrew their mortars and heavy machine guns when they could, but often they were over-run and captured. One variation of this style of defense was to let the UN troops take the hill and then throw in intense mortar fire which cost us heavy casualties.

Their camouflage is excellent. Bunkers, command posts, supply points, and troop shelters are concealed in creek beds where the undergrowth is heavy. On top of these bunkers are natural grass or rock.

Enemy Fortifications: The Chinese built bunkers against Allied air power and artillery. These were not very high on the inside but the tops consisted of layers of five feet of logs topped with five feet of dirt. The bunkers were arranged for fighting as well as for hiding from our fire; they had vast systems of communications trenches which allowed their occupants to move from one side of the hill to the other in comparative safety. Their automatic weapons had a very limited field of fire when fired from a bunker. At medium ranges most Chinese bunkers were invisible or extremely hard to recognize. Some of their bunkers were like apartment houses with triple entrances and connecting rooms and with grenade baffle walls. Some of these fortifications were over 30 feet deep and carved out of solid rock. Their one-man foxholes were usually circular.

Enemy Mines and Booby traps: The Chinese would use up to 40 pounds of TNT for a single antipersonnel mine to booby trap a bunker or foxhole. Their antitank weapons were standard U. S. antitank mines and captured Jap magnetic mines. They sometimes used 55-gallon gas drums full of TNT. They have 76-mm rifles and captured bazookas. They have recently used gasoline and TNT together as an efficient antitank weapon.

Supply: The enemy uses convoys of trucks to bring in ammunition and supplies. These vehicles usually stay out of artillery range but we have seen their lights at night coming over mountain passes in the distance. They hand carry on the final stage of transportation to the front or use mules for the pack

artillery and the heavy equipment. Being Orientals, they carry great loads of ammunition for long distances.

They carry their rice in a roll of linen pockets. Their canteens are very serviceable; many UN troops picked these up in the summer time for use as an extra canteen or as an oil container. Their grenades are carried in a three-pocket linen pouch.

UN FORCES

American Offensive Tactics: In ridgeline operations, the U. S. troops advanced in a column of files and only deployed for the assault. Often the frontage of a company in the attack was one squad. The leapfrogging of platoons was SOP. A platoon would be given the mission of assault, the other two, support (base of fire), and reserve respectively. When the assault platoon took the objective the support platoon would leapfrog through the assault platoon and would take the next objective.

Supporting fires would be used whenever practical. Tanks and self-propelled automatic antiaircraft weapons were often used if the objective was near a valley. The preparatory fire might include heavy harassing and interdiction fire the previous night and a time-on-target concentration just before the attack. The heavy machine guns and the 75-mm recoilless rifles were used to good advantage when they had fields of fire. 4.2-inch mortars were good but the way to really kill Chinese is for the Infantry to go in with hand grenades and BAR's and rifles. Most Chinese are killed during the attack by the assault platoon when it gets right on top of the Chinese.

At one time or another, the assault platoon is pinned down in part or completely. This is where the spirit of true leadership is necessary. Heavy friendly casualties are usually suffered when men halt during the assault or when crossing the flat areas covered by Chinese machine guns which are very accurate.

Attack Orders: The attack orders I heard at lower echelons were usually in two parts: one part consisted of pointing to a hill and the second part, saying "let's go." Very simple, but also rather unmilitary. This worked, but more information might have resulted in lower casualties and higher individual morale. Estimates of the situation were in order but often were not even mentally considered.

In a UN day attack, only one platoon should be committed at a time; no fancy flanking attacks should be attempted when two units are operating against the same general ridgeline unless they are separated by at least 1,000 yards.

Technique is something that can be taught: successful tactics are the coordination of the many techniques that are needed to win the battle.

Defensive Tactics: The division frontage might be up to 25,000 yards or might be as little as 6,000 yards. The company frontage in the defense of a quiet sector might be as much as 3,000 yards and as little as 300 yards. The typical frontage of a tight reinforced company was 700 yards. The attachments would usually be two to four machine guns and a 75-mm recoilless rifle and perhaps even a .50 caliber machine gun. This defensive position would have three rows

of tactical double apron wire and a protective fence not over 30 yards away from our bunkers. The bunkers would be on the forward slope except the command posts and the mortar positions. The fingers leading forward from the defensive ridge would be well-organized squad strong points and the outpost would usually be a platoon with stock piled ammunition. Communication trenches were dug later on. The bunkers were winterized and paths were made on the reverse slope so that men would not be skylined.

When hills in Korea were lost it was generally through a shortage of ammunition and bad platoon leadership. Troops attacked at night should never attempt a withdrawal while under attack.

MORALE, DISCIPLINE, AND LEADERSHIP

The old Army maxim that "a sharp unit is a good unit" holds true in combat. If your men keep their hair cut, shave, and stay clean, they look and feel better. If they police up, the area looks better. To build morale, tell a unit they are tops long enough and they believe it — pretty soon it is true.

Discipline should come from within but it comes from leadership. The officer may think his company is disciplined because they look good in garrison, but combat is the test. Don't ask me what it is, but it is married to morale. Praise is better than punishment.

Not one NCO in my company ever cracked up. They led their men by leading them. Some officers in my company were the best combat officers I have ever seen. They were leaders we could trust. They took their chances with the assault and the men would give them 100 per cent of their effort. They were all wounded at least once.

Common sense in combat on the line is a necessity. Stupidity will cause many casualties.

Sometimes squad leaders don't control their squads the way they should. This means that the platoon sergeant or platoon leader must physically lead a squad. However, the squad and the platoon gain new respect and confidence in their officers if they see them at the front. Unfortunately you lose a lot of fine officers this way.

Requirements of the Individual Soldier: An Infantryman has certain required duties which should be understood. He has to be able to care for himself and his weapon in all kinds of weather. He has to be able to hit point targets at 500 yards with an M1. He should know how to dig in, how to shoot at night, how to challenge, how to fire in the assault, how to read a map and an overlay, and he should know radio procedure. He should be able to march 15 miles and dig in and then move again and dig in. He should have common sense and be able to take care of himself on the field of battle. He should be able to carry a full field pack and a basic load and still be effective at two o'clock in the morning if his unit gets hit. He will learn all these things or he will be a casualty or be ineffective.

Some American troops were deficient in weapons training, especially the BAR. They did not know how to reduce stoppages and take care of this weapon in combat.

The men should be given intensive training in hand grenade

throwing; some men were injured by their own grenades until they learned by experience the limitations of their throwing power uphill.

All men need training in assault fire.

Snipers should be given additional training in their weapon. Most replacements don't know the zero of their weapon or how to zero.

The mortars (60 and 81) were not as effective in killing Chinese as they should be. They were just learning how to use the 75-mm recoilless rifle effectively in my organization when I left Korea.

Men should have more transitional firing in the States. They should fire live ammunition. They should zero their weapons and take them overseas with them.

Infantrymen should have a special distinctive uniform and they should have privileges to go with it. Low IQ's should not be the only criterion for service in the Infantry. The Infantryman kills Chinese and he knows it. He suffers the casualties and gains and holds the ground.

MISCELLANEOUS

Ammunition: The problem of ammunition was always with us. The so-called basic load did not apply to Korea: in the attack a rifleman carried four bandoleers and a full belt plus four to six grenades. In back of the company were native carrying parties who, with GI guides, carried M1, 57-mm and 60-mm ammunition, HE grenades, and litters.

Uniform: The summer uniform should include the poncho and perhaps a field jacket in the early spring. The steel helmet is a necessity. The bayonet is useful at night. In the winter the combat Infantryman should have all his winter clothes on his back. He should hang onto his sleeping bag.

Casualties: The evacuation of casualties during any kind of fighting should be handled by the first sergeant. He can usually order as many litters as he thinks fit. Ten litters should be on hand for a company attack. Litter teams should follow the company command group (which should be right behind the assault platoon).

Marching: We moved quite often, sometimes two or three times a week. Usually if the move was 20 miles or less we marched with the full field pack. Often the company ¼-ton trailers carried the crew-served weapons. These marches were very tedious and averaged 13 to 15 miles a day.

Communication: The company always used the sound-powered phone within the perimeter, an EE-8 with battalion and the OP. In addition they used the SCR 300 radio within the battalion net and the SCR 536. The 536 was not well suited to conditions in Korea. Batteries for the SCR 300 were carried as spares. Four miles of communication wire was the basic load of the communication section.

THE FUTURE

We have learned a lot of techniques which are good for mountainous terrain. We have also mastered (by necessity) a mass of technical first-hand weapon and tactical knowledge which will be a great help in any war. Our trained non-coms and trained soldiers will surprise the world if properly led and used. The cream of the American Army will come out of this war ready to give a good account of itself should the occasion demand.

THE VILLAGE

By CAPT ALFRED PHILLIPS, Infantry

The only place a six-cent stogie tastes like a two-bit clear Havana is in a rest area — after a couple of weeks in the lines. Lt Dave Swanson took another deep, appreciative puff and got ready to open the first of the many letters neatly piled before him. Then the inevitable interruption.

"Lieutenant Swanson."

Lt Swanson reluctantly raised his eyes from the letter and to his runner, Harby.

"Capt Nicholson wants to see you P.D.Q. A new lieutenant just arrived and the old man wants you to zero him in."

Swanson stuffed his mail into his pocket and walked to the company CP. He saw the company commander talking to an officer wearing a brand new set of fatigues and a self-conscious smile.

"This is Lt Kemp, Swanson. Kemp, meet Lt Swanson."

The men shook hands. The CO continued. "Swanson, I want you to more or less take Lt Kemp under your wing. He's taking the 1st Platoon. Introduce him around and help him out wherever you can. Swanson has the 2d Platoon, Kemp. He has been with us longer than any other officer. Anything you want to know, Swanson is your man."

As the two officers walked off, Lt Kemp hesitated, then said, "Look, Swanson, I'm fresh from the States, and there's a lot I don't know. I was in World War II; saw a little combat in the Pacific; but this terrain is a lot different from those jungles. I really would appreciate any information you can give me."

Swanson nodded, "Anything in particular you want to know?"

"Well, first of all, what kind of operations is the outfit pulling?"

"The part of the country we're fighting in now is pretty well built-up," answered Lt Swanson. "Village fighting, mostly."

Kemp looked a little worried as he asked, "How about casualties, Swanson?"

"Well . . . there are always casualties in any operation. What we try to avoid are the *unnecessary* casualties. We do that by training and rehearsing the men in the rifle and weapons squads. The old men help break in the replacements so the unit usually clicks when we hit one of these burgs."

"Okay, Swanson, you're an old hand — break me in!"

"Well, let's start with a brief look at the terrain you'll fight over. First of all, the *critical terrain features* — in this kind of fighting the critical features are the buildings themselves. Let's limit that to those buildings constructed of brick or masonry . . . we burn down wooden or flimsy houses. Anyway — it's the

buildings that we have to take and hold.

"Next, we have *limited observation* caused by dust, smoke, fire, and — of course — the buildings.

"*Fields of fire are short*, except down the streets and there's precious little to shoot at on a street.

"*Cover and concealment* is usually good. Again, thanks to the buildings. Our artillery or mortars, by building up piles of rubble, sometimes give the enemy better positions than he had originally.

"*Obstacles* are plentiful. The more time the enemy has, the more obstacles we can expect. You can usually count on *mines, barricades,* or *wire,* to slow us down.

"*Avenues of approach* are a problem. As we work through the town, our best bet is to go through or over the buildings. The streets are always swept by fire; we keep out of them as much as possible.

"From what I've told you so far you can readily see that the enemy has a lot of advantages," finished Swanson.

"I'll say," said Kemp, "he knows the terrain better than we do and can fix it up like you said — with mines and wire. And I should think he has a good chance to prepare routes to counterattack."

"That's right, Kemp. You see, the way most towns are built — in blocks of buildings — they are pretty easy to defend. The blocks give you an excellent set-up for defense in depth, and you have good routes for supply or withdrawal."

The two officers paused at Swanson's CP long enough for Swanson to introduce Kemp to his platoon sergeant and squad leaders. After Swanson got another cigar from his field bag and made his supreme gesture of friendship by offering Kemp one, the officers continued on toward the 1st Platoon area.

Swanson lit his cigar; then resumed, "There is no getting away from it. Fighting in built-up areas is rough. Combat is often at pretty close quarters. The enemy is often in the building — sometimes right in the next room. Air and artillery support is difficult with the enemy so close. Communications are tough, too, since radios don't work very well in cities. We rely on messengers once we are in a town. Another thing, we often make our attack to obtain a foothold in the town at right, since the enemy has good cover and concealment while we often have large open areas to cross before we get into the built-up area.

"We have several rules we follow whenever we fight in such places. I call them my 'Life Savers,' because whenever someone violates one he's liable to get a wooden cross.

"The first rule is *keep out of streets.* They're swell fields of fire for the enemy and he'll have them covered with automatic weapons. Try to work through buildings or over them.

"Next, *keep your support well forward.* Many situations arise that you can't plan for. They require quick decisions. You have to commit your supporting troops almost immediately; therefore, they have to be where you can get them at a moment's notice. As for supporting weapons, the short fields of fire and poor visibility caused by smoke and dust require automatic weapons to be kept forward constantly.

"*Decentralize control to the squad leaders.* You can't see each squad's situation the way you usually can in open country. That means you need good squad leaders. They, too, will have to take care of unforeseen situations. And if they aren't aggressive and capable enough to handle these problems, your best plans will fail.

"*Coordinate with your supporting weapons and the units on your flanks.* You'll need all the supporting fire you can get, and often the units on your flanks are your best bet when you need help. Make sure that everyone knows where everyone else is. The poor visibility makes it hard to tell friend from foe. By marking buildings already cleared and occupied by friendly troops we avoid shooting our own men.

"*Use covering fire for all movements.* You won't always spot the source of enemy fire so place covering fire on all openings from which the enemy can fire.

"Finally, *assign definite and limited objectives.* It's very hard to maintain control in a built-up area. Your men get lost easily. By assigning short, clearly defined objectives or phase lines — say, a street that crosses your zone — you help keep your control and avoid unnecessary loss of life due to confusion."

Kemp nodded, "It all makes good sense to me. I'll try to remember those pointers. Just one more thing, Swanson. You said I'll need good, aggressive squad leaders. What are my non-coms like?"

"All seasoned men, Kemp. Nothing to worry about there. Each squad leader has his squad broken down into a searching party and covering party, and each man knows his job."

"What do you mean by 'searching party' and 'covering party'?"

"Well," Swanson answered, "the *squad leader takes four riflemen* and forms a searching party. They actually enter and search the buildings. The remainder of the squad; that is, *the assistant squad leader, the AR team, and the remaining riflemen* form the covering party. They cover by fire the movement of the searching party. (See Figure 1.)

"As for the weapons squad, the rocket launcher team usually moves with the covering party to give the leading squad not only antitank protection, but to use the bazooka to 'mouse-hole' walls so our troops can crawl through them. These gaps keep us from having to move in the open. The light machine gun is under control of the weapons squad leader, and keeps moving forward to give the searchers covering fire.

"Here is your platoon now," concluded Lt Swanson as the two officers approached a group of men cleaning their weapons. The men raised their heads at the approach of the two lieutenants. They eyed the new officer carefully, and then looked over at Ptak, the platoon sergeant who was getting to his feet.

"Damn!" Sgt Ptak thought to himself. "Another shavetail to break in."

Sgt Ptak's salute was returned by the two officers. He shook hands with the new platoon leader when Kemp said, "I'm one of your new replacements, Sergeant." Ptak re-

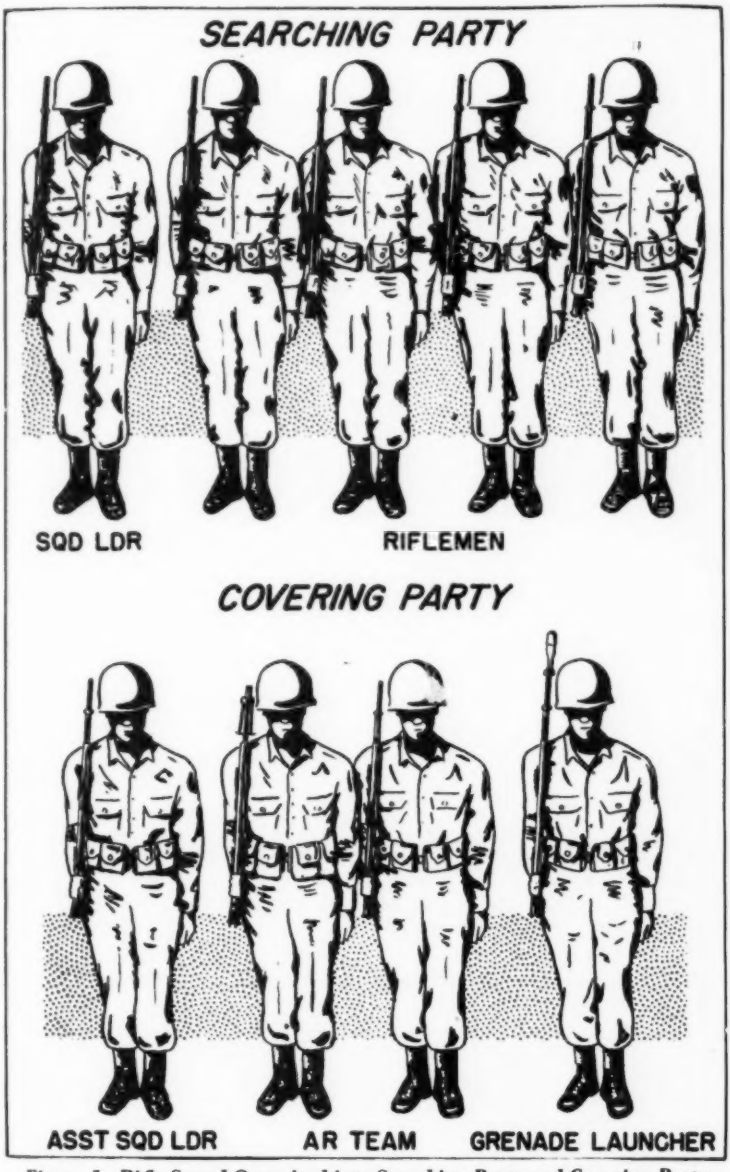


Figure 1. Rifle Squad Organized into Searching Party and Covering Party.

laxed and decided this might work out all right after all.

* * * * * *

Although Lt Kemp led the 1st Platoon of Baker Company through many operations, he never forgot "The Village." He called the little town by that name because its real name was soon lost in the maze of lengthy foreign names of other towns which were to follow.

Two short days after he joined Baker Company he was notified to report to an OP to receive Capt Nicholson's attack order. Arriving, he found the company commander and the other platoon leaders peering over a knoll overlooking a community of some thirty buildings surrounded by wheat fields. The town was about a thousand yards north of their vantage point. (See Figure 2.)

Capt Nicholson's order was brief but complete. He passed around maps of "The Village" on which each building was numbered and the streets given pronounceable names. He began:

"The town to our front is defended by an estimated reinforced platoon of the 8th Aggressor Regiment.

"Our company has the mission of clearing this town. Able Company will attack through the woods on our left and the 2d Battalion will be on our right.

"We'll attack at 1405 today with the 1st and 2d Platoons abreast, 1st on the left, 3d in support. Seize the village in zone as far as phase line ORANGE as shown on the sketch and continue the attack to phase line GREEN on order. Line of departure is the road on the edge of the woods we are in. It lies immediately to our front.

"Artillery and mortar preparatory fires will begin at H minus 5 and will lift on call. Smoke will be laid at H minus 3.

1st Platoon, you will have attached one 57-mm rifle squad, one 60-mm mortar squad, and after a foothold in the town is seized, a heavy machine gun squad. No tanks are available for this attack. Attack at H-hour, seize that portion of the village as far as line ORANGE in your zone and prepare to continue the attack on order. See your sketch for location of boundaries and objectives."

Then followed orders to each of the other platoons and the attached weapons. When Capt Nicholson released his officers, Swanson and Kemp made a reconnaissance together and coordinated their plans of maneuver. Satisfied with his decision, Kemp issued his order:

"The town that lies before you is defended by an estimated reinforced platoon of the 8th Aggressor Regiment.

"We attack at 1405 to clear the buildings in the left half of town. The 2d Platoon will be attacking the right half of town at the same time. We shall seize our portion of the village as far as phase line ORANGE, which is the near side of Main Street and prepare to continue the attack on order to clear all the buildings in our zone, up to phase line GREEN, which is the far side of town.

"The road to our front is the line of departure. We'll move out in platoon column in the following order: 1st Squad, Weapons Squad, 2d Squad, 57-mm Rifle Squad, 60-

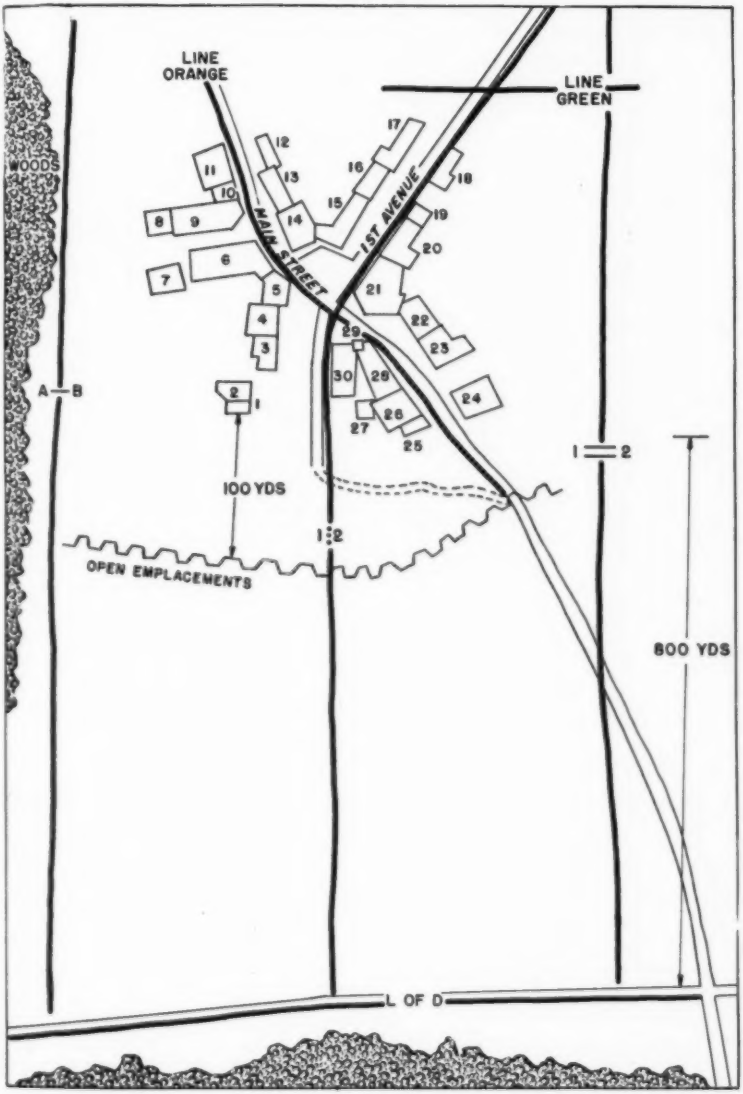


Figure 2. "The Village."

mm Mortar Squad, 3d Squad. As soon as we receive fire from the enemy, the 1st Squad and Weapons Squad deploy and return fire, 2d Squad move up on line to the left and 3d move up to the right. We'll attack the open emplacements in line. When these emplacements have been seized the 1st Squad will move up and lead the attack into the village, entering and clearing Buildings 1 through 6 in that order. As soon as Building 3 is cleared, signal our light machine gun to move up by tossing a green smoke grenade. Then wait for the signal from the 2d Platoon that Building 30 has been cleared. When this signal is received, continue to clear Buildings 4, 5, and 6. After you have cleared Building 6, the 2d and 3d Squads will pass through you to continue the attack. You will support them by fire from Building 6.

"2d Squad, you follow the 1st Squad into town, keeping one building behind them and supporting them by fire. When Building 6 has been cleared, pass through the 1st Squad there and attack Building 7. Continue to clear 8 through 11 on order.

"3d Squad, you follow the 2d, staying one building behind. Support our movement and the movement of the 2d Platoon by fire. Be prepared to take over any of the missions I gave the 1st and 2d Squads on my order.

"Weapons Squad, have your rocket launcher team move with the covering party of the leading rifle squad. Have them take their instructions from the assistant squad leader. Have the light machine gun select firing positions to cover the leading rifle squad, paying particular attention to Buildings 6 and 7. Coordinate with the squad leader of the 1st Squad in selecting initial firing positions and signals for displacement of the LMG."

Lt Kemp then continued giving the various attached weapons their order. Firing positions were located for the mortar squad. The 57-mm rifle was to support the attack to the first objective from a position near the open emplacements, and then move forward. After the Heavy Machine Gun Squad became attached, the gunner would continue to operate the heavy machine gun, firing down the left flank of the town. The remainder of the squad would displace forward on order with the light machine gun and the 3.5-inch rocket launcher.

H-hour came all too soon. The platoon moved across the line of departure and received no enemy fire until they were within 150 yards of the open emplacements. They deployed, and assaulted the trench. A portion of the enemy surrendered; others fled into the village. The platoon leader called for smoke to screen all the buildings except 1 and 2. The searching party of the 1st Squad attacked these buildings, and when they were clear, called the covering party forward. The rocket launcher team followed closely behind the covering party.

The open area between Buildings 2 and 3 was then screened by a smoke grenade, and the searching party hit Building 3. Having cleared it, the squad leader again called his covering party and the rocket launcher team forward, and threw a green smoke grenade signalling

the LMG forward. The LMG Squad entered Building 1 and went into position in Building 2, firing through a window in the north wall of that building. The 2d Squad then moved up and occupied Buildings 1 and 2.

The 2d Platoon in the right half of town was having a little trouble, but supported by fire from the 1st Squad in Building 3, they soon cleared Building 30. They indicated that the building was clear by hanging a sheet from a window.

The rest of the attack went on as planned. In Building 4, which was clear of enemy, one of Kemp's men was killed when he tried to pick up a booby-trapped bottle of vodka. Building 5 was entered by blowing a hole in the common attic wall that joined it with the attic of Building 4. Entering the building from this top floor the team had the advantage of working downward. (Experience proves that it is easier to attack downward from upper stories.) Grenades were used freely when moving from one floor of a building to another and before entering rooms. The men moved from one building to another through the "mouse-holes" and eventually arrived at phase line ORANGE.

The attack then halted. Squad leaders reorganized their forces. This consisted of positioning their men to repel a counterattack, redistributing ammunition, evacuating wounded, replacing key personnel, and reporting to their platoon leader. Lt Kemp, who had been following the leading squad throughout the operation, reported to Capt Nicholson. When given the go-ahead signal, the attack was continued as planned.

Phase line GREEN was reached with less trouble; a large group of enemy who tried to flee into the woods west of the village were cut down by the heavy machine gun.

Lt Kemp then went around checking on his squads. He sent Sgt Ptak to move the light machine gun from Building 14, where it had last gone into position, to Building 16.

Ptak found Sgt Foster, the weapons squad leader, and gave him the order. Just as the gun crew started to move out of the building, Foster asked, "Well, what do you think of our new boss?"

"Couldn't have done better myself," Ptak called back over his shoulder. "Okay, men, let's get moving."

◆

"Good command and continuous supervision to make our training and management the best it possibly can be will do much to 'sell' the Army to the soldier and the public."

General Mark W. Clark

LETTERS

I was much pleased to receive a complimentary copy of the INFANTRY SCHOOL QUARTERLY, *October, 1951. The receipt of the copy makes me feel that its commanders of the past have not been forgotten by The Infantry School.*

In looking over this complimentary copy I notice reference to an article in the July, 1951 QUARTERLY, *"The Infantry and Its School," describing the efforts of the Infantry to obtain a special school for Infantry such as the engineers, artillery, and cavalry had had for many years prior to the establishment of The Infantry School.*

I am writing today to renew my subscription to the QUARTERLY. *I have asked that my subscription start with the July 1951, issue which contains that article.*

As a Colonel of Infantry, in the Spring of 1917, I was sent to Fort Sill to organize a school where, for the first time in the United States, Infantry *officers would be taught what was then considered to be the proper use of all Infantry weapons.*

Later during World War One as a Major General, I commanded the 37th Infantry Division in the United States, France, and Belgium. Returning to the United States in April 1919, I was reassigned to command The Infantry School. I relieved that able Infantry officer, Colonel H. A. Eames. Colonel Eames had commanded the School from the time I left it at Fort Sill, Oklahoma, in August 1918, until my return to it at Camp Benning, Georgia.

In more than forty years of active duty, my most interesting service was that of assisting in the organization and command of The Infantry School, until I was made the first Chief of Infantry in July 1920.

As Chief of Infantry my foremost interest and price was in the School which I visited frequently.

You may understand from the foregoing my continued interest in the School and in all of its graduates.

Experiences of World War II and of the present fighting in Korea have caused not only the officers and enlisted men of the Armed Services, but a large group of the citizenry of the United States, to realize the importance of the thorough training of Infantry personnel.

My congratulations and best wishes go with this letter to all the personnel now serving at the School. You are most fortunate.

Sincerely yours,

C. S. Farnsworth

Major General

U. S. Army, Retired

In reference to your INFANTRY SCHOOL QUARTERLY *dated January 1952, article titled, "75-mm Rifle Platoon in Korea," by Captain Phil R. Garn, the rank of a platoon sergeant as a Master Sergeant (E-7) and a section sergeant as a Sergeant First Class (E-6) is designated.*

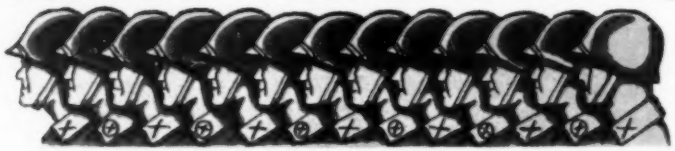
In our Table of Organization and Equipment number 7-18N, dated 30 December 1947, with change 1, dated 18 September 1950, and change 2, dated 15 November 1950, it labels the platoon sergeant as a Sergeant First Class (E-6) and the section sergeant as a Sergeant (E-5).

I request verification pertaining to this matter.

Halvor K. Christiansen
First Sergeant
Company D
12th Infantry Regiment

You're right! — we're wrong! Please accept our sincere thanks for bringing it to our attention.

Meet the Authors



Lt Col Karlton Warmbrod, author of "Defense of Rear Areas," graduated from OCS in 1942 and was assigned to the 80th Division, serving in Europe with that division as a company commander and battalion executive. He is now an instructor in the Tactical Dept. of The Infantry School.

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Major James M. Pratt, author of "Battalion S2 in Korea," entered the Army in 1941. He commanded a company in the 29th Division in Europe during World War II. His intelligence activities include two years as battalion and regimental S2 of the 3d Division, more than a year of which was spent in Korea. He is now an Intelligence Instructor at The Infantry School.

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Captain Willis L. Buckner's service dates back to 1935 when he enlisted at Fort Benning. He graduated from OCS in 1942. A great deal of his time since then has been in S2 and S3 assignments in IRTC camps, the Philippines AFWESPAC, Task Force Frost, USAF in Austria, and in Germany. Since 1950 he has been a regimental S3 in the 8th Division where he developed his mock 57-mm rifle training aid .

"My career is brief and oriental," says Lt William F. Strobridge who wrote "Squad Reconnaissance Patrol." In 1947 Lt Strobridge enlisted in the Army and served a tour with the 25th Division in Japan. Reenlisting in the States he joined the 7th Regiment, 3d Division and returned with that unit to Korea. He won a battlefield commission and is now recuperating in the States from wounds received last fall.

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Captain Frank F. Rathbun, a former QUARTERLY staffer, picked up his "Cold-Wet Weather Tips from Korea," during his present tour with the 25th Division, where he is assistant G3. Captain Rathbun served with the 6th Division in the Pacific during the past war, served a tour with the occupation forces in Japan, and one at The Infantry School — partly with the QUARTERLY staff, before beginning this, his third period of Oriental service.

* * * * * * *

"Sub-caliber Recoilless Rifles" is a contribtuion by Mr. Ray S. Miller. Ordnance Armament Shop Superintendent at Fort Benning. During a lifetime of work in the ordnance field, he has developed many items of equipment that have proved

highly valuable to the Armed Forces and have earned him numerous citations.

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The article "Airborne Support Company," written by Captain Kenneth D. Mertel, is the first published on this subject. Captain Mertel was an enlisted man from 1942 to 1945 when he graduated from OCS. He served with the 86th Division in the Philippines from 1945 to 1947. Afterwards, he was assigned to the 2d Division and for the next three years served with the 82d Airborne Division, where he commanded a support company. He is presently attending the Advanced Course at The Infantry School.

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Captain Ralph T. Tierno, author of "An Obligation, Soldier," served in Hawaii as an enlisted man for more than a year before entering West Point in 1942. Upon graduating in 1945, he was assigned to the 97th Division in the Pacific. From 1948 to 3 December 1950, he served with the 7th RCT, 3d Division in Massachusetts and Korea. Since that time he has been assigned to The Infantry School and is currently attending the Advanced Course.

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The author of our antiaircraft article, Lieutenant George C. Dorste, has an Infantry and Artillery background. Entering the Regular Army as an enlisted man in 1936, he graduated from AAA OCS, was detailed to Infantry in November 1944, and served as a platoon leader in the 90th Division until he was wounded near the Rhine in 1945. Lieutenant Dorste is now finishing a year in Korea as Headquarters Battery Commander of the 3d AAA AW Bn (SP) with the 3d Infantry Division.

* * * * * * *

Major J. K. Cockrell presents in this issue his third airborne article for the QUARTERLY. As in his past articles, Major Cockrell challenges airborne planners to simplify airborne procedures and techniques — and proposes methods of doing this. Major Cockrell graduated from the Infantry Officers Advanced Course at Fort Benning in April 1951 and is now S3 of the 325th Airborne Infantry Regiment at Fort Bragg.

* * * * * * *

A newcomer to the QUARTERLY's list of authors, Captain Alfred Phillips graduated from the Infantry OCS in January 1944. He served as rifle platoon leader and rifle company commander in the 86th Division in both the European and Pacific theaters during 1945 and 1946. Captain Phillips reentered active duty in March 1950 and is currently assigned to The Infantry School as principal instructor of The School's Combat in Cities Problem.

INSTRUCTIONAL MATERIAL

As a service to its readers, the *Quarterly* regularly lists new instructional problems available through the Book Department, The Infantry School. All these problems contain lesson plans and narratives for the instructor. Additional items will be found on pages 19 and 54.

Problem #1150. **Marksmanship, Preparatory Familiarization Firing, Pistol.**

Four hours on aiming, positions, trigger squeeze, sustained fire, quick fire, safety precautions, familiarization firing. Price, 6¢.

Problem #1320. **Marksmanship, Cal. 30 MG, M1919A6.**

Eight hours of general orientation; methods of instruction; fundamentals; range procedure; emplacing; zeroing; sighting and aiming; manipulation; instruction practice firing, Table I, Course A. Price, 6¢.

Problem #1370. **Technique of Fire, MG Cal. 30, and MG, Cal. 50.**

Eight hours on characteristics of fire; classes of fire; fire distribution; fire control; fire commands; overhead fire. Price, 6¢.

Problem #1673. **Target Grid Method of Fire Control.**

Four hours on description and use of the training shell range for Infantry mortar training; conduct of 81-mm platoon fire on training shell range. Price, 15¢.

Problem #1680. **Survey, Heavy Mortar Company.**

Four hours on introduction to heavy mortar company survey; equipment and organization of the survey party; duties of survey personnel; position area, target area, and connection survey; solution of survey problems. Price, 15¢.

Problem #1685. **Mechanical Training, Crew Drill, Technique of Fire, 60-mm Mortar.**

Eight hours on mortar characteristics; ammunition; mounting and dismounting; assembly and disassembly; placing the mortar in action; duties of crews; marking base deflection; hand-held mortar; duties of the squad leader (observer); determining initial data; fire commands, methods of adjustment; fires and effect; field proficiency tests. Price, 15¢.

Problem #6551. **The Morning Report.**

Two hours on the purpose and preparation of the morning report, to include entries made. Contains practical exercise. Price, 10¢.

Problem #6951. **Air - ground Operations.**

Two hours on applicatory exercise in the air-ground operations system to include target description, target designation, coordination, air request procedure and using air support. Contains practical exercise. Price, 25¢.

Problem #7254. **Preparation of a Field Exercise, Rifle Squad in Attack.**

Six hours on steps in the development of field exercise, rifle squad in attack, to include ground reconnaissance and issuance of operation orders. Contains practical exercise. Price, 6¢.

Instructional Pamphlet. **Standard Fire Commands and Firing Tables for Infantry Weapons.**

Price, 6¢.

Training Card. **Patrol Leader's Order Card.**

Price, 5¢.

The above items may be ordered from
The Book Department, The Infantry School, Fort Benning, Georgia